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ARTICLE I.

CLINICAL AND PATHOLOGICAL REPORTS OF CASES OF INSANITY.

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Three hundred and thirty-seven males, and three hundred and ninety-seven females, together, seven hundred and thirty-four, insane persons have been under observation at this hospital since May, 1883. Of this number five hundred and fifty-four are present at the close of the calendar year, December 31, 1883.

During these past seven months the histories of nearly three-fourths of the patients have been collected in large volumes, and every available source of information ransacked, main reliance being placed upon narrations of relatives and physicians who previously attended the cases; but it sometimes happens that either no friends of the lunatic call, or that nothing can be elic-

ited from them through their stupidity or unwillingness to impart information from various motives. This, fortunately, is not usual. Useful clues are afforded by the stenographer's reports of the trials on file at the county agent's office. About half the patients themselves are able to give, with more or less reliability, an account of their past lives, and from the remainder, except in cases of dementia, occasionally something can be learned also. The attendants soon learn the peculiarities of those intrusted to their care, and report to the physicians on their rounds, or at once if necessary.

The strictly medical duties of the physicians are multifarious enough for a corps of specialists. Surgery, ophthalmology, otology, dermatology, gynecology, and rarely obstetric aid are called into requisition.

Where an autopsy is justified by the history of the case and *intra viam* observation, all departures from the normal are carefully noted, whether occurring in the brain or trunk viscera. The former is placed in a solution of kali bichromas, often changed, and then transferred to methyl, and finally ethyl alcohol. This prevents the precipitation of the phosphorized and nitrogenous constituents of the brain, and ensures an equable hardening. The ventricles must first be injected and the fissures separated to permit access of the fluids. By the second or third month, if the pia can be separated with the forceps, sections may be cut. In the laboratory, a modification of Gudden's water microtome is used, which I described and exhibited at the last meeting of the American Microscopical Society. Sections of one-thousandth of an inch are floated off and boiled in a water bath with a carmine solution for about two hours, then washed and treated with a little glacial acetic acid, washed in filtered water and transferred to alcohol, and finally to clove oil till clear. Mountings are made in Canada balsam or glycerine jelly, and the slides forwarded to physicians interested in the study of the pathology of insanity.

From time to time cases illustrative of the various phases of mental disease and their treatment will be published in this journal, such matters as are of interest only to specialists being pro-

duced in the *Journal of Neurology and Psychiatry, Alienist and Neurologist, and Journal of Nervous and Mental Disease*.

Female case 275. Delirium grave, published in the *Journal of Neurology and Psychiatry*, August, 1883, was republished in this journal November, 1883.

Female case 238. Paretic dementia, published in the *Alienist and Neurologist*, January, 1884.

Cases of insanity in children from the ages of six to sixteen, published in the *Journal of Neurology and Psychiatry*, November, 1883.

Male case 227. Melancholia from lead poisoning. John H., aged 51, Swede, single, admitted June 7, 1883, presented the appearance of apathy and mutism observable in ordinary melancholia, with the addition of epileptiform convulsions. A friend visited him, and from him it was learned that the patient had been working in a lead factory on State street for three years. An examination revealed the characteristic blue discoloration of the gums and other symptoms of lead poisoning. He was given iodide of potassium, tonics and bathed frequently. He steadily improved, and was discharged fully recovered August 31, 1883.

Sanitary boards would do well to examine into the conduct of lead factories, and insist upon proper measures being adopted to protect workmen against plumbic toxæmia. Had the cause of this attack been unascertained, the patient would have died insane.

Male case 250. Monomania. R. D., admitted July 12, 1883; age, 32; Scotch; book-keeper; single. We were somewhat surprised to see this gentlemanly-looking fellow standing in the main hall the day of his admission, among others committed to the asylum. He spoke so intelligently, with a slightly dejected air, we concluded to make him comfortable first, and next day get his story from him. Dr. Thuemmler informed me that he had obtained the first volume of it next morning, and we should go together to hear the remainder. I told the patient that Dr. T. had detailed all that had been told him, and to proceed where he left off. The thousand and one nights' tales of Scheherazade were nothing to it in length, nor could Mark Twain's ram story equal it in digression. The substance of it was that he was an honest,

good fellow, who by too much religious zeal, laboring hard to become a sermonizer in the Methodist church, ignoring completely physiological demands, came to have a mature bee in his bonnet. He sent missives of love to a lady in the congregation, who rejected his suit. This he took greatly to heart. A certain Rev. J. T. Inman, Station D, New York, insisted upon spending several thousand dollars in advertising how to cure the errors of youth, merely to annoy our patient. Wherever he went that horrible advertisement appeared, and finally stared him in the face from his native village paper in Scotland.

He went back to Montreal, and several clergyman began throwing out insinuations against his purity, in their sermons. He came to Chicago, and between Inman's advertisement and the Methodist clergymen all preaching at him, he became disgusted and went to London. There he committed the horrible crime of having an involuntary seminal ejaculation, upon seeing two good looking young ladies in the same stage with him. He had the location near Hyde Park entrance, the number of the omnibus, and the minute and hour it occurred, as exact as the recording angel could have had it. He shipped immediately for the Indian archipelago with a bluff old sea captain, who constantly insinuated that our patient was not as pure as he might be. Thence he went to Cape Town, South Africa, where he was engaged by a book-dealer, who fancied him greatly, and with whom he would have done well had it not been for the appearance of that cursed Inman advertisement in the colony paper. He even saw it in Boerish Dutch. He fled back to America, and even began to dislike going to church (another high crime which he bewailed) because of the still more direct preaching at him he encountered everywhere. Even the published sermons alluded to him. On a lake vessel the purser lost some money from his office. Forthwith our patient knew *he* was suspected of having stolen it, and now the police became the objects of his hatred. They passed his room window singly and by twos all day and night, and from what scraps of conversation he could overhear, he knew they talked only of him and his probable theft. He came to Chicago, and noticed how the police followed him and eyed him askance, and finally one policeman had the impertinence to get upon the same street

car he did. Outraged nature could bear no more. He knocked the city guardian into the gutter, and was promptly arrested. He told his tale of persecution, and was brought here.

In July, 1883, a slight pneumonia attack laid him up for awhile, and upon his recovery I took him into my office, where he worked faithfully on statistics and medical records till his discharge, August 24, 1883. By regulating his habits, and with the use of tonics, he improved rapidly. I selected books for him, and by means of long conversations tried to improve his mental background until he acknowledged his delusion, and as I bade him good-bye on the train he told me all he feared was a return of the delusions in some new form. This was a good indication of mentality coming to his rescue, and I told him his only hope was self-education, a cultivation of his reasoning powers, and holding in check emotionalism of all kinds. He wrote to me from Montreal that he was about to embark for Scotland, his home, and that he was quite well. The September following he sent me an article he had written for a Scotch newspaper.

He had been treated some years before by Dr. Yellowlees, the famous Scotch alienist, for melancholia, a condition his evident monomania simulated in the last attack through the depression his vagaries engendered. It must not be forgotten that a monomaniac may, by reason of his delusions, be depressed, and that a melancholy person who *reasons* in a perverted way upon the cause of his delusions is a monomaniac, and not a melancholiac. A term which would express logical perversion would best suit this malady, as a monomaniac may have a dozen delusions, though he usually has one prominent at a time about which he is always ready to argue. This case is instructive in the mentality possessed by the patient, which could be appealed to for his future good. He read works on his disorder intelligently, and recognized the fact that his mind was disordered, and even called my attention to descriptions fitting his case. There are instances of patients hiding their delusions for the purpose of gaining freedom, but he did nothing of the kind; his frankness and dread lest the errors should return were good guarantees of his recovery. Torpidity of the bowels and sluggish circulation from which he suffered upon his arrival were corrected by strychnia.

Male Case 188. Mania. Joseph C., admitted March 28, 1883; aged 24; Bohemian; shoemaker; married. The *furor maniacorum* in this case was intense, and would come on without warning. When sitting or standing in the grounds with other patients an outbreak of maniacal rage would seize him, and often six attendants were necessary to control him. Was crafty and agile. Escaped in June, 1883, by bolting through door; ran up ladder to roof and danced over the slates and chimneys at its dizzy height with a strait-jacket on. He was baited with a plug of tobacco; as he attempted to take it with his teeth his feet were pinioned. Dr. Theummler has found great benefit to accrue from the use of Squibbs' fl. ext. conium in this case, ten minim doses *ter in die*. When his dose was missed he became violent again. August, 1883, apparently recovered, but as once before he had a remission of two weeks he is detained under observation a few weeks longer. Is now quiet, industrious and rational. He blames his insanity upon something he drank in a restaurant, but doubtless with little reason. Discharged apparently fully recovered September 24, 1883.

Male Case 56. Mania from traumatism. Patrick K., admitted Nov. 1, 1878, aged 44: Irish; policeman. Has grandiose delusions and others which partake of his former police duties. For instance, in the winter of 1880 I sat beside him to examine him, when he addressed himself and suspicions to Dr. Spray, the superintendent. He insisted that the superintendent had some plot concerning us. He was shot in the neck by a burglar at the Halsted-street bridge October 30, 1874. He had been on the force for ten years. Dr. H. M. Bannister published this case in the *Journal of Nervous and Mental Disease*, p. 434, July, 1879, as insanity resulting from a wound of the cervical sympathetic. The scar is just anterior to left sterno-cleido-mastoid muscle two inches above its insertion. He is extremely suspicious and abusive, but otherwise harmless. There are no traces now of the flushing which Dr. B. noticed on the left side of the face. Incurable.

Male case 218. Paretic Dementia. P. M., admitted May 22, 1883, age 40; Norway; physician; single. A classmate of the patient stated that he had decided paretic symptoms two years

ago; hesitancy of speech, grand delusions and amnesic periods, and that he had been arrested and fined repeatedly for publicly urinating in the streets. He attacked a saloon keeper fiercely and was brought here. He several times micturated against wall of ward and denied all knowledge of such acts when accused of them. Having great strength he broke a corridor door through in an attempt at escape, but calmed down when reasoned with and convinced that he had been tried by jury and found guilty of being insane (so we may construe the operation of our State laws). His delusions of grandeur were intellectual; says he was four years assistant physician in the Christiania asylum, which is quite probable; fancies himself a great gynæcologist; occasionally imagines himself very wealthy. He stood well in medical circles, and really was a good surgeon, but while here showed little interest in anything beyond his meals and the trivialities of his surroundings. Occasional attacks of furor were followed by epileptiform convulsions. An aunt on mother's side had an indefinite mental complaint showing probable heredity predisposition. When he spoke his face would suffuse with blood, this capillary flushing patient stated was inherited. He succumbed to an attack of typhoid pneumonia September 10, 1883. Autopsy ten hours after death: Scalp thick, and more than ordinary quantity of blood oozed, or rather, ran from incisions. Skull very thick and dense, opened with difficulty. Left cerebrum præ-frontal region large extravasations, imparting a scarlet flush, extended from base to first frontal fissure and to operculum nearly to sulcus of Rolando. Leucocytic exudation general, adhesions of dura to brain in region of superior longitudinal sinus, summit of dura full of hæmatoidin crystals. One pæchionian body on left side just anterior to sulcus Rolando. Occipital region capillary stasis great, but relatively less than in frontal and parietal region. Small arterial rupture near pons, base of temporal region. Right cerebrum venous stasis on summit more marked than on left, a general flush about one inch anterior to præcentral sulcus extending backward, not involving the temporal lobe more than occipital. Isthmus extremely large. Pons bowed out unusually (normal for this brain). Total brain weight 57 ounces.

Sections microscopically examined showed the usual evidences of paretic dementia, such as thromboses, kinked, distorted blood-vessels with perivascular channels (now established as pathological not physiological). The vascular fluctuations observed in his face during life were similarly occurring in his brain, with the addition of ruptures and tortuosities due to feebler support of contiguous tissue. Intemperance was an element in his case, but whether causative of or consequent upon his insanity, certainly it was an aggravating factor.

Male Case 247. Epileptic Insanity. F. S., admitted July 5, 1883, aged 6 years—youngest case on record in this asylum. American. Epileptic since one year old. Maniacal; restless; fights and cries when opposed or taken hold of. Does not speak. Habits filthy, mischievous. Notices very little, but attention attracted by noises. Health and physique otherwise good. Mother appears indifferently balanced. Under kali bromidum quieted down rapidly, and was taken home 3 days after admission, improved but seeming dazed. The child had evidently had no proper treatment previously.

Male Case 260. Epileptic Insanity. A. M., admitted July 26, 1883. American. Aged 24 years. Hostler. Single. Epileptic 6 years. Often one paroxysm in 3 or 4 weeks, and, if excited, 2 or 3 daily. Body spotted with trichophytosis corporis. Mother, brother, and sister scrofulous. Amnesic. Aura starts with whirring noise in head. Hallucinations of hearing. Repeats the same sentence over many times, but otherwise apparently sane. Was industrious and peaceable till December 14, 1883, when, after several severe epileptic attacks, he grew violent and struck an attendant, exhibited extreme restlessness, turning round often, lapsed into stupidity, alternately with fits, 2 or 3 daily; but by the last of December is improving.

Male Case 214. Katatonia. F. S., admitted September 25, 1879. Age 39. German. Laborer. Married. Apparently demented on arrival. Emaciated, with muscular rigidity. No hereditary history of mental disease. Father died of phthisis pulm. Mother living and aged. Up to June 25, 1879, had been at work, but developed delusions of persecution—thought his associates wanted to kill him—suddenly refused to speak

or eat; saliva oozed from his mouth. Pulse 120. Has to be fed. October 10, spoke rationally. Says he remembers everything that transpired during his demented state; that he feels well and happy now, but that he had painful delusions and heard a voice telling him he must keep silent for several days. October 22, became suddenly cataleptic, stupid, and nearly in same condition as when admitted. Bowels atonic, enemata necessary. October 28, improving gradually until rational again by November 25. Mentioned the imperative voice again, as having controlled his actions, warning him against moving a single joint. The condition is not catalepsy, but a cataleptoidal one which could be overcome entirely were volition not dominated by hallucinations. January 15, 1880, maniacal furor great. January 24, says he is God. February 8, still violent. February 18, improved gradually till taken home, July 11, 1880. [The foregoing observations were made by Dr. A. W. Hagenbach, the assistant physician.] Re-admitted January 13, 1881, since when the cyclical character of his attacks were pretty much as above—melancholic, cataleptoidal conditions and mania, December 31, 1883, passing into the cataleptoidal state, preceded by quiet for 3 months. His mind is weaker than formerly, but his bodily condition is better, having grown stouter.

ARTICLE II.

MY EXPERIENCE WITH JEQUIRITY IN THE TREATMENT OF GRANULAR EYELIDS. By F. C. HOTZ, M.D., Chicago. Read before the Chicago Medical Society, December 3, 1883.

A little over a year ago Dr. Wecker, of Paris, to whom ophthalmology is indebted for the introduction of several valuable and useful remedies, announced the discovery of a remedy which seemed to possess a healing power surpassing anything heretofore used in the treatment of granular conjunctivitis. He introduced the remedy under the odd term "jequirity," which is only another name for what in this country is popularly known as sea beans, or "crab eyes," though these red, egg-shaped peas

which you see here, grow neither in the sea nor in crabs, but are the seeds of a South American plant, *abrus precatorius* (also known as "wild liquorice," and by half a dozen other names).

Among the natives of Brazil these peas had long enjoyed a great popularity as a good remedy for inflamed eyes, and the discovery of their important medicinal properties by Dr. Wecker was the result of a mere accident. A Brazilian gentleman, who at different times had been a patient of Dr. Wecker's but never been fully relieved of the trachoma of his eyelids, was induced to try the popular home remedy. The quick and complete relief he experienced after its use of course gave him a very high opinion of the remedy, and being of a sympathetic nature probably he pitied the multitude of sufferers whom he saw wandering in the streets of the European capitals from oculist to oculist and from one hospital to another seeking, but never finding a permanent relief for the granulated eyelids. So this gentleman sent a package of sea beans to Dr. Wecker with a full description of the manner the natives use them, and with an urgent request to try them, giving his own case as a reference for their efficiency.

Dr. Wecker complied with this request, following at first strictly the directions of the natives, who prepared a weak infusion (0.3 per cent.) with which they bathe the eyes three times per day for three consecutive days; then he proceeded to test the effect of infusions of various strength, increasing it to 2, 3 and 5 per cent.* His experiments soon convinced the doctor of these facts:

1. That jequirity has a most remarkable effect upon the conjunctiva, producing a peculiar, violent, acute inflammation.
2. That the severity of this inflammation can be graded by the strength of the infusion and the number of applications.
3. That this jequirity conjunctivitis involves no danger to the eye, and
4. That it cures the granulations and clears the vascular corneæ quickly and thoroughly.

* His prescription for the 5 per cent. infusion is as follows: Take 10 grams of the skinned seeds, pulverize (not only crush) them well; add 50 grams of cold water, leave it stand twenty-four hours, then filter before using. I have recently found that the infusion is just as effective if the seeds have been macerated only ten minutes

That such statements, coming from such a source, should attract a good deal of attention among oculists, was very natural, considering the present state of our therapy for granular eyelids. With the most approved methods the treatment is slow, tedious, and uncertain of its success. No wonder that Dr. Wecker's accounts of his remarkably quick cures by a few applications of jequirity were read by many with a great deal of skepticism. And I confess I belonged to the skeptical class until last summer, when Dr. Gruening, of New York, showed me in a number of cases so marvellous results, and spoke so warmly for the remedy that I became greatly interested, and resolved to test it. The material for these tests was found in abundance at the Eye and Ear Infirmary; for, being a State institution, it receives the poor patients from all parts of the State of Illinois, and therefore among its inmates there is always a great number of patients afflicted with granular ophthalmia in its various forms and phases, from the fresh acute attack to the old chronic form, with atrophy of the conjunctiva, entropium, ulceration and vascularization of the cornea.* Assured that the jequirity treatment does not injure the eye, I thought the experiment was a legitimate one and, worth the trial, inasmuch as a quick recovery would be a great blessing to those poor patients and a financial gain for the State.

I began my experiments in July. At first a 2-per-cent. infusion was used twice or three times daily for two or three days, according to the severity of the reaction produced. Later on (after I had read Dr. Wecker's paper in the July number of the *Klin. Monatsblätter*, where he recommended the 5-per-cent. infusion) the strength of the infusion was increased to 5 per cent., but the number of applications reduced to one per day, and with this stronger lotion two applications (and in a few cases even one) were sufficient to produce the typical jequirity inflammation. The infusion was applied upon the conjunctiva of the everted eyelids by means of a camel's-hair brush.

The application itself was always entirely painless, and not till six or eight hours later did the patient begin to feel the action of

* For instance, among the 394 house patients of the Eye department admitted during the year ending September 30, 1883, there were 115 cases of granular lids with and without pannus.

the medicine, by pain and irritation of his eyes. After twenty-four hours there always was already more or less œdema of the eyelids, much redness and swelling of the conjunctiva, discharge of a muco-purulent character, and the patient complained of considerable pain and great tenderness of the eye. Under these circumstances the everting of the upper lids for making the second application of the medicine was very difficult and painful, but the medicine itself, also then, caused no pain. The night following the second application was the worst time for the patient. He suffered agonies of pain and walked the floor unless given a large dose of an opiate, and in sensitive persons the violent local inflammation reacted upon the whole system, causing fever and general malaise. The swelling of the eyelids attained such enormous dimensions, that eyelashes and lid-borders were completely invisible, and that it became exceedingly difficult to open the eye. The tarsal and retro-tarsal conjunctiva was covered with a thick, white coat of a croupous exudation; the ocular conjunctiva was very red and swollen, so that it projected far over the margin of the cornea. The cornea always showed remarkable changes: where it had been vascular and hazy before the treatment, it was more so now, and where it had been transparent before, it became dull, lusterless, and gray.

Those symptoms of the fully developed jequirity ophthalmia are frightful, indeed, and may fill the mind with anxiety for the safety of the eye; and time and again have physicians, when looking at such an eye, betrayed, either by the expression of their faces or by remarks, that they entertained serious doubts regarding the harmlessness of the treatment, any assurances to this effect notwithstanding. But if this condition of the eye can alarm the physician, how must it frighten the patient if he was not prepared for it. I have, therefore, told every patient, before I applied the remedy, that it would inflame his eyes very badly, and that he would suffer considerably for one day; but at the same time I gave him the firm assurance that there was not the least danger, that his eye would safely get over the inflammation in a few days, and then quickly get well. I made it a rule to give this information and explanation in every case, and I have good reasons for being satisfied with having done so, and I would

recommend this rule to every one who wishes to use jequirity. It has a wonderful, strengthening effect upon the faith and moral courage of the patient, when he hears his physician speak of the direct effect and the ultimate result of the proposed treatment in such precise and positive terms, and his faith in your medical experience will become unbounded when he finds afterwards that everything passed off exactly as you predicted.

When the typical effect of the jequirity, the croupous-blenorrhoeal ophthalmia, was obtained, the remedy was discontinued. The patient remained in his room for two or three days, bathing his eyes frequently with water to remove the discharge. When the pain was unusually severe and the swelling excessive, ice-cold compresses were applied during the day, and opiates given at night. Pain and swelling, however, subsided always very quickly, the pain seldom lasting more than 24 hours; and two days after the last treatment the œdema of the eyelids had usually pretty well disappeared. The croupous exudation was then thrown off, and within one week the eye had recovered from the immediate effect of the jequirity treatment.

During this time already, but more so in the second and third weeks, the wonderful effect of jequirity upon the granulations of the conjunctiva and the pannus of the cornea became manifest. In the successful cases, at the end of the third week, the conjunctiva was as nearly normal as this was possible under the circumstances; or, in other words, the few treatments thoroughly eradicated the granulations, and removed all thickening and roughness of the conjunctiva; but, of course, they could not remove atrophic patches and cicatrices previously produced in the conjunctiva by the disease.

The action of jequirity seemed equally effective whether enlarged papillæ or lymph follicles constituted the predominant feature of the granular disease. I paid especial attention to this point, but failed to discover any marked difference; the most cases of the papillary type were cured by the first jequiritization, a few required a second course of the same treatment; but the same can be said of the follicular and of the mixed forms. Only one case (Grimm) with well developed granulations (papillary form) was not benefitted by the treatment, though it produced

a very severe and typical jequirity ophthalmia. But I am inclined to attribute this failure to the fact that at the time of jequiritization the eyes were in the state of acute inflammation, a very severe acute relapse of inflammation just having attacked the lids and the cornea. We know that acute granular conjunctivitis and acute keratitis (pannus) do not tolerate the application of stimulants or irritants. This has been the universal experience with all the various modes of treatment heretofore, and I believe jequirity will prove no exception to this rule. In the case referred to it affirmed the rule; for it decidedly intensified and prolonged the acute inflammation. After this experience I have always subdued every symptoms of acute inflammation by the frequent use of ice water compresses before the jequirity was applied, and I have not had another failure since.

There is another class of cases which received no benefit from jequirity. But they really do not belong to the class of granular eyelids; they are a peculiar form of catarrhal conjunctivitis, its peculiar feature being this: That the inflammation affects chiefly the retro-tarsal portion of the conjunctiva. This portion is infiltrated, swollen, succulent and sometimes thickly studded with lymph-follicles, while the tarsal conjunctiva is smooth and thin showing perhaps only a few isolated small follicles. I treated three cases of this kind with jequirity, and none were materially benefitted by the treatment.

Now, what was the effect of jequiritization on the cornea? In the first place, I will say, that my experience fully agrees with Dr. Wecker's in this important fact, to-wit: That in no case the cornea received the least injury or damage from the effect of jequirity. It was used upon eyes with normal corneæ as well as upon eyes with ulcerations, pannus, leucoma of the cornea; but not in one single instance have I noticed any ill effect. During the acme of jequirity ophthalmia, it is true, the cornea became gray and dull, but with the subsidence of the inflammation it always recovered its normal transparency and bright lustre. Corneal ulcers neither got any worse nor was their repair materially promoted by jequirity.

Non-vascular opacities of the cornea (leucoma) were not affected at all. But most remarkable was the effect upon the

vascular opacities (pannus) of the cornea. I saw the densest pannus which had reduced the sight to the bare perception of light (just about as much as you can see through your closed eyelids) clear away within two weeks so much that the patient could easily walk alone and decipher large type. And this result was obtained in cases which, for many months past, had shown no sign of improvement, though no remedy was left untried save the operation of peritomy and the inoculation of blennorrhœa. And, indeed, it seemed to me that these cases of inveterate pannus, which resisted all other medicines, yielded the best results; here the jequirity accomplished wonderful changes and showed its virtues in the most brilliant light. The first favorable sign, I always noticed, was the brighter luster of the cornea; then the blood vessels on its surface became thinner and receded gradually from the center to the margin, while the epithelial layers of the cornea became visibly clearer.

So successful was the effect of the jequirity upon the cornea that only in three eyes out of thirty-six it failed to remove the pannus. In one eye the conjunctiva was so atrophied that the 5-per-cent. lotion of jequirity could not produce any inflammation, though it was used every day during a whole week. The other two eyes were those of that patient (Grimm) mentioned above, which were treated while in the state of acute inflammation.

Summing up my experience gathered from the study of 65 eyes (50 in the Eye and Ear Infirmary, 15 in private practice) which I treated with jequirity from July to November, I can express it in the following propositions:

- 1, Jequirity is the best known remedy for the chronic granular conjunctivitis.

2. It is the most effective remedy for the clearing of trachomatous pannus, and in inveterate forms of pannus it is preferable to peritomy, as well as to the inoculation of blennorrhœal virus, because it does its work quicker than the operation, and safer than the inoculation.

3. It has no injurious effect upon the eye, and can be used with perfect safety, even when the cornea is ulcerated.

4. But it should not be used while the cornea and conjunctiva are acutely inflamed.

5. It does not benefit those cases of chronic conjunctivitis in which the symptoms of catarrh (increased secretion, succulence of the retro-tarsal folds, etc.) predominate over those of trachoma (enlarged papillæ, and lymph follicles, plastic infiltration of tarsal conjunctiva).

6. The most violent attacks of jequirity ophthalmia accomplish the speediest cures of granulated eyelids and the quickest clearing up of the vascular cornea.

ARTICLE III.

EMETICS, OR BRISK CATHARTICS IN STRUMOUS OPHTHALMIA.

By R. F. HENRY, M.D., Princeville, Illinois.

About ten years since, I treated a case of strumous ophthalmia or phlyctenular keratitis, for several weeks without giving any permanent relief to the suffering child. I consulted the best authorities I could find and called a reputable specialist who visited and prescribed for the case. Various local applications were made to the eye; mild cathartics were administered; tonics and alteratives, nourishing food, etc., were used, but the case grew worse and worse until I became disheartened and alarmed. I then administered an emetic of ipecacuanha, the good effects of which were manifested in a few hours afterwards.

The photophobia, which was intense, was relieved so that the child could open its eyes in the light. Improvement commenced in the swollen lids and pustular prominences on the cornea, all the bad symptoms rapidly disappeared without any further local treatment, and with the use of tonic doses of quinine and nutritious diet the patient was soon restored to good health, and has never had any return of the disease.

In all the patients I have treated since the above, I have given the emetic when I first visited them, whether it was at the commencement of the disease or at whatever stage; or whether they had been submitted to previous treatment. I have not found it necessary in any of these cases to use any local treatment to the

eye, except rest to the eyelids, exclusion from light, and repeated fomentations with warm water.

I would not hesitate to repeat the emetic if necessary, but all the cases which I have treated since I learned the practice have recovered so rapidly that no repetition was called for. In one case I administered a cathartic of rhubarb and calomel after the emetic had operated, but I am not sure that the case would not have recovered without it. If any one should hesitate to give the emetic on account of any great fear as to its depressing effects I can assure him that in every case in which I have used it, quite the contrary has been the effect, the system rallied in place of being more depressed under the action of the remedy. For suggesting the above treatment I am indebted to the *London Lancet*, vol. 1, No. 2, 1859, in which was published a lecture on strumous ophthalmia delivered in Middlesex Hospital by Mitchell Henry, Esq., F.R.C.S., Surgeon to the Hospital and to the North London Ophthalmic Infirmary. With regard to the name of the disease the lecturer said "it is not happily chosen, for the ocular affection is by no means peculiar to the scrofulous, the worst cases being often free from all glandular affections, strumous abscess, or tubercular deposit; it is true that you will often find it associated with all the hideous features of scrofula, but in many instances the disease is merely the local evidence of constitutional disorder, where there is no pretense for imputing the strumous diathesis to the sufferer. Why it is that in some young children any irritation of the primæ viæ is attended with sore eyes, and in others with diarrhœa or stomach cough, or a genuine flux of the bronchial mucous membrane, or not infrequently with convulsions, are secrets belonging to the mysteries of vital peculiarities which are to us at present inexplicable. The fact should, however, at once suggest to us a caution not to treat any of these affections as if they were mere local ones, lest by injudicious applications we convert what are mere symptoms of bodily disorder into genuine obstinate diseases."

"Regarding the disorder as an indication of an acid and foul condition of the primæ viæ—an outward sign of a constitutional disorder—you must proceed to treat it as you would any such complaint in another part of the body." The author then says

that "the first measure must be the administration of an active purgative to clear away that thick and peccant mucus which always occupies the intestines of delicate, ill-nourished children. For this purpose there is nothing like calomel, for, as a purgative, it is often invaluable. It acts strengthening on the delicate glandular structure of the intestines, just as, continued for some time, it acts at last on the salivary glands of the mouth, and produces from them a copious pouring out of saliva. The best combination is calomel, rhubarb and scammony." On children, the lecturer said, "An emetic will often act like a charm, and, for the moment, subdue at once the photophobia and the intolerable itching; but in adults such remedies are not so readily submitted to, and you must be content with purgatives." I cannot, from my limited experience, speak with so much assurance as to the good effects of active cathartics, but the author above quoted said in the same lecture that it was "surprising to see how a child would sometimes pick up and gain in a few days some pounds of weight after the operation of a brisk cathartic. The mucus is cleared away, and the lacteals left free to absorb the chyle with which, for the first time, they come in contact. Never, then, forget to administer an occasional purgative to both old and young when these disorders of mal-assimilation are concerned." As to the results of this treatment which had been practiced by him for six years and by several of his colleagues at the eye infirmary for ten years, he said, "They have been most gratifying; glandular lids, chronic inflammation of the tarsal margins, ingrowing eye-lashes, are almost unknown to us except in cases that have formerly been submitted to the stimulating plan."

In setting so much importance on this remedial measure I do not wish to be understood to undervalue the other means of restoring health, such as diet and regimen, aids in digestion, if necessary, alteratives and tonics, and common-sense local applications. I believe they are all good in their place, and some are indispensable, but I am convinced that they will do more good after the operation of an emetic than they will before.

ARTICLE IV.

A CASE OF RESECTION OF THE ELBOW-JOINT. By W. H. WASHBURNE, M.D., Florence, Wis.

Wm. J. G., a healthy young Irishman, æt. 21 years, recently arrived in this country, and while engaged in operating a horse-power wood-sawing machine, brought his arm in contact with the revolving saw, on December 7, 1882.

Upon examination, it was ascertained that the saw had made a transverse wound upon the posterior aspect of the forearm, about one inch below the point of the elbow.

The ulna was badly shattered from the olecranon process to the extent of about two inches. The radius was divided immediately above the bicipital tuberosity. The ulnar nerve was severed, and all the soft parts badly contused and lacerated, as the saw was not revolving very rapidly. The brachial artery was not injured. There was not any alarming hæmorrhage. The patient reacted well from the shock of the accident.

Two hours after the accident, with the efficient aid and council of my friends Drs. C. A. Fortier and R. W. Odell, resection was performed. The upper three inches of the ulna was removed, together with the head and neck of the radius, the humerus being left intact.

The arm was then placed in a modified Hodgen's splint and elevated from the bed, and carbolyzed dressings applied (5i to 5vi of olive oil).

Inflammatory action of a high degree soon appeared, the part swelled enormously, so that the sutures which brought the edges of the wound into apposition were torn asunder. Dec. 8, the evening pulse and temperature were respectively 112 and 101 $\frac{4}{5}$ °. From this time to Dec. 12, the pulse ranged from 90 to 108, and the temperature from 100 to 101 $\frac{1}{2}$ °. Dec. 12, the patient had a severe chill, followed by a rise of temperature, the thermometer in the mouth indicating 102 $\frac{1}{2}$ °; pulse 108. Nausea and vomiting now commenced, every kind of aliment, and even water, being rejected. A few doses of carbolic acid, gr. $\frac{1}{2}$ in 5ij of lime-water, relieved these symptoms. He was then put upon quinine in 5 gr. doses, repeated every three hours. The wound was now dis-

charging a large quantity of sanious pus. Dec. 13, temperature reduced to $99\frac{1}{2}^{\circ}$ at 9 A. M.; pulse 86. From Dec. 13 to Dec. 26, temperature ranged from 100° to 102° ; the quinine continued in smaller doses. The wound still dressed with carbolized olive oil (5ij to Oj). Abscesses now began to appear both above and below the elbow joint.

Feb. 1, 1883. Wound nearly healed; one abscess, situated just above the elbow and to the inner aspect of the arm, still discharging pus. The arm was now taken out of the Hodgen's splint, and placed in an anterior jointed splint, and the wounds dressed with basilicon ointment. Patient very much emaciated by his long confinement to the bed and his great physical suffering.

March 1. Several small pieces of necrosed bone were removed from the arm during the month of February. Patient gaining health and strength.

May 1. Several more small pieces of necrosed bone have been removed, and the wounds are now all healed.

November 30, 1883. Upon examination to-day, I find the patient a good specimen of a healthy man. His injured arm is still gaining in strength; in size, it is considerably smaller than its fellow. The elbow is ankylosed in a slightly flexed position. The muscles of the forearm possess considerable power, so much so, that he can lift and carry a weight of nearly if not quite fifty pounds; he can hold ten pounds out at arm's length, and is able to handle an axe in chopping wood; in fact, he is now employed as "chore" man by one of our citizens, and is able to perform all the duties pertaining to that place except that of sawing wood. He has acted in the capacity of hostler during the past fall.

The destruction of the ulnar nerve is a bad feature in this case, causing the patient more or less trouble and inconvenience all the time. The hand has but slight power of resisting the cold, and the little finger in particular is very sensitive to the cold, being cold all the time. It is devoid of sensation, and several times it has been cut and contused without his being aware that it had suffered an injury, until his attention was attracted to it by the sight of blood or ecchymosed spots.

On the whole, this man has an exceedingly useful member,

considering the character of the injury; one that is a vast improvement on a "stump."

ARTICLE V.

LEPROSY IN MINNESOTA. Report to the State Board of Health, of Minnesota, by DR. CHR. GRÖNVOLD, of Norway, Minn., Member of State Board of Health of Minnesota, and Chairman of its Standing Committee on Leprosy.*

There has lately been written much about a center of leprosy in the Northwest, from which the disease is said to be spreading. It may be interesting to see, how facts support this statement.

As early as in 1864, the condition of the lepers among the immigrants to the northwest had been an object for the attention of medical men from their old country.

In that year Dr. J. H. Holmboe, surgeon in charge of the Hospital for Lepers in Bergen, Norway, visited this country to study the influence that change of climate and other relations had on the development of the disease. He found twelve cases, of which two had originated in this country, while one, which came here leprous, had got well. His impression was, that their condition of health was better, than it would have been if they had staid in the old country.

In 1869-70 the settlements were again visited by a medical gentleman from the old country, the late Professor William Boeck, of Christiania, Norway, well known in medical literature for his writing on leprosy and syphilis. The result of his investigations in the Northwest Settlements may be read in *Nordiskt Medicinskt Archiv*, Band III., No. 1. He found in the three States, Wisconsin, Iowa and Minnesota, eighteen cases of leprosy, all of which had come from those parts of the western Norwegian seacoast, where the disease is endemic. Nine cases had the anæsthetic form, three the tubercular, while in six

*This article was furnished to this Journal as an "Original Communication," but for want of space was for more than one month deferred publication. It has since appeared in the *Journal of Cutaneous and Venereal Diseases*, but we are pleased to present it in the department for which it was originally intended as a contribution which can not fail to interest our readers in the North-West.

cases both forms were represented at the same time, or one superseding the other. In regard to the time of the appearance of the disease, in nine it had commenced already in the old country, and of these, five had lepers in their family, while four did not know of any leprous relations.

In the other nine cases the disease first commenced in this country. Of these, eight had lepers in their family, and the disease broke out respectively, two and a half, three, three and a half, five, six, eight, nine and a half and ten years after their arrival. These eight cases, that were developed on American soil, may depend on heredity, or they may have been caused by contagion in the old country, the only place, where it is probable that they could have met with other lepers, or the disease may have developed from a miasma in the old country. Either of the last two suppositions being right, the time of incubation will for two of the cases be nine and a half and ten years. Prof. Boeck considers them all as depending upon heredity in direct or lateral line. If he had any doubt, he says, in regard to the propagation of the disease by heredity, these cases would have convinced him.

As an instance, here is one of the cases, described in the above named *Medicinskt Archiv*.

"S. S., 45 years old, came, fourteen years ago, to America, to the place, where he now resides, and was in every respect perfectly well. His father had died, about 50 years old, in the Lepers' Hospital at Bergen; his brother and sister died leprous in the old country, one and four years ago; his father's sister had also had the disease. S. continued to be in good health, after his arrival to this country, for nine and one-half years. Four and one-half years ago he commenced feeling heavy and drowsy, and two years later, after a violent cold, tearing and fleeting pains announced themselves in the hands and feet, and also in the upper and lower extremities, and at the same time there was swelling of the same parts and the face, and an eruption of red spots appeared. The pains were so violent that he was obliged to stay in the house from January to May, and when he was able to get out of bed, his strength was gone, and he discovered, that his sensation was very much lessened along the peroneal side of the feet and legs, and on the ulnar side of the hands and arms. Since that

time he has always suffered from fleeting pains in the extremities and feels heavy and drowsy. 'I will never have a day of health any more,' he said. Sensation is at present very weak in hands and feet, as well on the outer as on the inner side, from the hands along the arms to the shoulders, and from the feet along the legs and thighs to the neighborhood of the hip. The muscles of the right hand, between the first and second finger, and those of the fifth finger, are considerably wasted."

This patient left the old country in good health, and continued to be so for nine and one-half years after his arrival in this country, in a place where there were no lepers before, and where it is not known that he has had communication with any.

The last of the nine cases, developed on American soil, did not know of any leprous relation, and may possibly be referred to contagion. The case is, in short, as described in the above named *Archiv*.

"B. J. is 39 years old; came to this country fourteen years ago; has for twelve years suffered, and is yet suffering from rheumatic pains in the extremities. Recently, after a day's hard work, she had in the evening a violent chill, and the next day there appeared spots on the arms, and successively on the lower extremities, chest, back, and face. These spots are distinctly morphea spots, in some places slightly elevated. In them there is either complete anæsthesia, or very little sensation; outside of them the sensation is normal, except on the external side of the feet and legs. Her appearance is very good. She is fleshy, has good appetite; the bowels are a little constipated; menstrual flow scanty. She does not know of any leper in the family. She has once, six or seven years ago, been in the home of a leper. By others, it is said, that she, for some time, has taken care of a leper."

Prof. Boeck had his doubts whether this person did not also belong to a leprous family, and whether the disease was not due to heredity.

The professor was of the opinion that lepers here are better off as regards their disease than they would have been in the old country. "They have come away from the place where we see leprosy may originate spontaneously, and which certainly

will favor its development, when the disposition thereto is inherited. They have settled on fertile lands, where they certainly have to work hard to make a living, but they generally undergo no hardships, as we in Norway understand the term. Here is no work that can be compared with that done at the midwinter fisheries in open sea off the Finmark coast, or the hardships suffered while tending the cattle on the high mountain plateaus, which causes, so often, bring out the latent leprosy."

Since Prof. Boeck's visit in 1869-70, investigations have been continued in Minnesota regarding the occurrence and character of the disease in that state.

At present six cases and their whereabouts are known, all emigrated from that part of western Norway, where the disease is endemic. None of them are confined to bed, and most of them are able to perform their daily duties.

The following table will show some of the particulars of the cases :

		Age.	How long leprous.	How long in this country	Form of disease.	Leprous Relations.
Case I.*	Male	58 years old	18 years	27 years	Anæsthetic	Father, and father's sister, brother, sister, consins
Case II.	Male	29 " "	7 "	20 "	Tubercular	Father, two brothers
Case III.	Female	29 " "	7 "	16 "	Tubercular	None
Case IV.	Male	35 " "	16 "	12 "	Anæsthetic	None
Case V.	Male	67 " "	Prodromes in the Old Country 10 years	17 "	Anæsthetic	None
Case VI.	Male	44 " "		15 "	Anæsthetic	Probably a brother

* Case No. I. is described by Prof. Boeck as No. I., and is the one described above as "S.S." It is the only case, yet alive, of them he saw in Minnesota. He has, since the Professor saw him, been tolerably well, until the latest years, when the disease has made a quicker advance.

It will be seen, that two of them have the tubercular form, while four have the anæsthetic; in two of these—IV. and VI.—a little complicated with the tubercular. Two of them—IV. and V.—had the disease in the Old Country; but of these, one did not suffer much from it before seven years after the arrival to this country.

Of the other four, three know of leprous relations, while one—III.—denies that the disease has ever been in her family. She

is from a district where there are many lepers—Balestrand in Sogn. The main features of the case are:

Case III. came to America when she was 13 years old, in company with a sister of her mother, sixteen years ago, and has all the time since lived near the place she first went to. The first two years she lived with her aunt, but, after confirmation, she served as housemaid in families of the neighborhood, until she, seven years ago, discovered the first signs of the disease. After a severe illness, she says caused by cold, the legs swelled and some vesicles appeared, first on one, later on both ankles, followed by sores.

At present she exhibits the tubercular form of the disease, and presents a very repulsive appearance. The complexion is pale, or rather dirty white, the skin of the face thickened and rough. Tubercles, some suppurating, some torn by scratching, are seen over the eyes and on other places of the forehead, on the right nostril, and on the cheeks and chin; also on the ulnar side and back of both hands, where, as well as on the outer side and back of the feet and lower part of the peroneal side of the legs, is some anæsthesia. The voice is hoarse and rough. The nose seems flattened on account of the alæ spreading out. The lobes of the ears and the lips, especially the upper, are very much thickened and elongated. The eyebrows and eyelashes are gone, conjunctiva dirty white, with a troublesome secretion; cornea somewhat opaque; her eyesight is very much impaired. She denies having any discoloration of the skin, any sores or tubercles in other places than those above named, and on the ankles, where there are deep ulcers, laying the bone bare. She does not suffer much; only once in a while she feels a little oppression, and some slight pain in the chest and back; but this, she believes, is only caused by weakness.

Appetite is irregular, the sleep is commonly good. Menses commenced to be scanty when the disease broke out, and stopped soon. She feels worse in the spring and fall, but is seldom confined to bed. She takes cold easily. Like almost all lepers here, she ascribes her disease to cold. She suffered so from cold, she explains, in a place, where she was working, that she then and there got the disease. It is not known by herself or anybody

else, that she ever met with a leper in this country. She must have carried the germ of the disease with her from the old country, whether it has been communicated by contagion or a miasma, if she is right in her statement that the disease has been neither in her father's nor mother's family. The disease became evident when she was twenty-two years old, and had lived in this country nine years. She will not remember any prodromes; has probably tried to conceal her condition as long as possible. She tries yet to put the best appearance on her miserable condition.

Ten lepers of the immigrants are known to have died in Minnesota since the settlement of the country, all of them males. Of these seven died in the last seven years, and the following table will show some of the particulars of the cases :

	Age at time of death.	How long leprous	How long in America.	Form of the disease.	Leprous Relations.
Case I.	49 years old	24 years	19 years	Anæsthetic	Brother of mother's father
Case II.*	56 " "	14 " "	24 " "	Tubercular	A cousin
Case III.	35 " "	10 " "	9 " "	Anæsthetic	Father's brother
Case IV.	About 30 years old	3 " "	13 " "	Tubercular	Father and brother
Case V.	About 30 years old	12 " "	15 " "	Tubercular	Brothers, brother diseased
Case VI.*	62 years old	30 " "	21 " "	Tuberc. first 7 years, afterwards anæsthetic; disease stopped before death	Brother and father's brothers
Case VII.	30 " "		10 " "	Anæsthetic	Mother's brother

* Cases II. and VI. were seen by Prof. Boeck in 1870, and described by him in the above named journal, as observation 3 and 2. Case II. got steadily worse until death, eight years after the Professor saw him, but in No. VI. the disease made no advance after the time Prof. Boeck saw him. He was in good health for many years, with the exception of the anæsthesia in the places already attacked, and an always open and discharging ulcer under one foot. When this discharge stopped, about fourteen days before his death, vomiting set in, which became more and more distressing, so he could keep nothing in his stomach. He was not confined to bed, but moved about as usual, until the day and hour of his death, which occurred thirty years after he was attacked, seven years after Prof. B. saw him and described his case.

It will be seen that three of them had the anæsthetic form, and died twenty-four, ten and thirty years after they got the disease. The last case, No. VI., Boeck's observ. 2, is an instance of one form changing into the other; the disease commenced in the tubercular form, and continued so for seven years; after a violent fever, it changed into the anæsthetic. Three had the tubercular form, and died, after having had the disease fourteen, three, and

twelve years. Case II. got the disease ten years after his arrival in this country, when he was 42 years old.

All of them had lepers in their family ; three of them had the disease in the old country ; three got it here ; two, ten years, and one, three years after their arrival. Four of the lepers—two of them living yet—have full grown children, born in America ; two have also full grown grandchildren. One (No. VI. of last table—Boeck's observ. No. 2) has fifteen grandchildren, aged from 2 to 22, and two great-grandchildren, and in none of them has any sign of the disease been discovered. The other (No. 1 of the first table, Boeck's observ. No. 1), who belongs to a family so strongly infected with leprosy—lepers were his father and father's sister, his brother and his sister—has full grown children, and many grandchildren of an age up to 17, all in good health.

The suggestion of the above facts, as far as they go, seems to be, that the disease is not so easily acquired here in the Northwest as in the old country, be it by heredity or contagion. The dry climate is possibly not so favorable for the development and the communication of the disease, that at present mostly belongs to the sea coasts and islands. The chances of contagion are decidedly less here than in the old country ; there is greater cleanliness, as a consequence of greater economical prosperity, and the new built houses of the first settlers in a new country furnish no filthy nests for contagion.

But once acquired, the disease seems to run its regular course without abatement.

Norway P. O., Goodhue Co., Minn.

ARTICLE VI.

OUR INSANE. A Lecture Delivered Before the Chicago Philosophical Society, January 19, 1884. By S. V. CLEVINGER, M.D., Special Pathologist Cook County Hospital for the Insane.

Volumes have been and will be written concerning what has been done, is being done, and will be done for the insane, and anything like an attempt at an exhaustive review within our

present limits must fall short of the vastness of the subjects involved. A purely sociological view of alienistic matters would require inclusion of allied considerations the scope of which would drive us further from the matter in hand. Let us, then, look at the insanity about us from the standpoint of the alienist, who comes most in direct contact with our insane and the problems suggested by their existence. Retrospective and prospective generalizations are afforded from this vantage ground as follows:

1. Scientific inquiry into the causes, phenomena, and treatment of insanity has resulted in an increased number of recoveries, more humane treatment of the insane, and enlightenment as to the prevention of insanity.

2. We are indebted to European research for the greater part of our knowledge of insanity as a disease, and comparatively little has been done in America to forward psychiatric studies.

3. Popular conservatism due to lack of information on these subjects is the cause of the national apathy in this respect, but eventually an activity in the prosecution of these studies will prevail in the United States unsurpassed in any other part of the world.

Insanity is the inability to be impressed and to conceive quantitatively and qualitatively enough to guide actions in harmony with the individual's age, circumstances and surroundings, and the failure to properly coördinate impressions and frame logical conclusions and actions, except when occurring in the course of sleep, trance, somnambulism, coma, or simple epilepsy, hysteria and chorea, or during ordinary mental abstraction.

But the futility of making precise relative definitions is well known. No matter how thoroughly the pathology of disease of any kind may be known, disease itself is incapable of definition. The mathematician's definition of a point is an absurd one, owing to our inability to determine the boundaries of the finite. Where mentality begins and ends must be conditioned, and medically it is sufficient that the brain is the accepted organ of the mind, and that insanity is a manifestation of a brain disorder. The definition attempted above is modified from Spitzka's, and doubtless

not improved. Reference to hallucinations is omitted, for they may exist without insanity. Germany, Italy and France have dropped definition discussions. England and America, in their medico-legal evolution, have perpetuated them, as it is found a convenient stumbling-block in the way of medical testimony.

Prevalent ideas of insanity are vague ones, and biased as are all sociological conceptions. One who visits an insane asylum for the first time finds little therein as he had mentally pictured it. Many of the patients are at liberty to come and go at will, some being merely paroled on their honor not to leave the grounds. You may observe gangs of insane workmen for weeks and fail to discover anything indicating want of ordinary intelligence among them. Female patients occupied in the sewing room seem intent upon their work, though an occasional silly act or expression may escape them. In most wards, as a rule, there is quiet and order, the inmates pace to and fro, or are seated about apparently absorbed in thought, the cases requiring more control are gathered together in one part of the building, and here the ideal madman may be seen with hair erect, eyes protruding, flushed, angry countenance, demonstrative and boisterous; but he may not be so dangerous to others as the quiet maniac who watches his opportunity to catch you off your guard. Every degree of physical condition is observable, from the robust to the weakly. Some are confined to bed by sickness, others appear to possess the greatest vigor. Strength and ferocity sometimes exist in the same individual, and as may be imagined, it forms a disagreeable combination. The weakly are as apt to be troublesome, and usually supplement their lack of muscle by craftiness. Destructiveness is a prominent trait in a large number of cases. Walls are defaced, windows and furniture broken, bedding and clothing torn into shreds, regularly, day after day, or night after night by some, and only at long intervals by others. The tendency of repeated attacks of furor is eventually toward terminal dementia, "that tomb of the mind whence no errant intellect ever returns." In this stage the lowest automatic movements of the body are alone performed, the individual breathes, eats and sleeps, but must be led and fed, nothing can arouse him from his stupor, and death approaches all too slowly. One of the most

noticeable forms of insanity met with in asylums is known as melancholia agitata, wherein there is much weeping, verbigeration and wringing of hands, with other actions indicative of distracted grief, but a more horrible form of melancholia exists which would escape your notice altogether, owing to the listless apathy of the sufferer. Melancholia attonita, or "thunder-struck melancholia," is a mental condition of great torture. Those who have emerged from it with sound minds state that they have seen their relatives and friends torn limb from limb, and that the food offered them was soaked in human blood. Every imaginable fiendishness was enacted before their eyes with the accompaniments of groans, shrieks, appeals for help and other frightful sounds. These phantasms are terribly real to those who experience them, and resemble vivid nightmares.

When the furibund condition is not present, the chronic maniac is not apparently distressed by his hallucinations. He accepts his vagaries as real, and confuses the purely subjective with the really objective scenes. Skeletons, ghosts, and other hideous forms mingle with the actual personalities about. Divinities, saints, angels, and devils float to him from the sky. Voices, pleasant and unpleasant, follow him, and frequently in obedience to their commands he will do violence. Thus, upon one occasion a negro at the County Asylum, while looking from his window saw God in a chariot, who commanded him to break his way out. An hour thereafter the corridor looked as though a tornado had swept it. The exalted emotional condition of simple mania may never reach the explosiveness of furor, the entire life of a hypomaniac may be one day dream. Everything seems beautiful to him; trees, fountains, flowers, birds, gorgeous surroundings, artificial as well as natural, abound in this phase. Everybody and thing seems pleasant, no matter what the surroundings may be. The heart is happy, the mind is blissfully contented. Something similar obtains at times in the delusions of grandeur attending parietic dementia. Millions of dollars, diamonds, ships, railways and great enterprises, or intellectual achievements are claimed by him. Often he is a great magnate, general, or even deity. This is an incurable form of madness, with an average duration of three years, during which the sense of touch is so blunted that injuries

may be sustained without consciousness of them, and by paretic dements the invariable declaration is made that they feel perfectly well, or never felt better in their lives.

All know the frequency with which homicidal attempts are made by the insane, and many an ugly scar across the throat testifies to an attempt at suicide previous to admission. Every conceivable shade and variety of the many forms of insanity exist and frequently blend with each other confusingly, but in the main Spitzka's classification is justified by well-defined cases, such as simple mania, simple melancholia, katatonia, transitory frenzy, stuporous insanity, primary and secondary confusional insanity, primary deterioration, terminal dementia, senile dementia, hebephrenia, paretic dementia, luetic dementia, dementia from coarse brain disease, delirium grave, alcoholic, hysterical, epileptic and periodical insanities, idiocy, imbecility, cretinism, monomania, traumatic, choreic, post febrile, rheumatic, gouty, phthisical, sympathetic and pellagrous insanities.

All forms of insanity then known were included by Hippocrates in mania, melancholia and dementia.

In the eleventh century Gheel, in Belgium, became a resort for the insane, brought thither by a prevalent superstition that divine interposition in their behalf could be had there, and today, at this town, a large population is engaged in caring for lunatics on a peculiar system, one or two patients being allotted to a family, under the supervision of Dr. Peeters. As sociological investigations have but recently begun, and history in the past afforded us mainly personal gossip about princes, the ideas concerning insanity in olden times have been but imperfectly gathered, but enough is known to convince us that ancient tribes were not agreed as to the causes or treatment of lunacy, but in the main regarded it as evidence of the possession of a benign or malign spirit. Records of devils exorcised and of especial protection, even honors, accorded lunatics, show something of the way in which they were regarded. Court fools were frequently idiotic, monomaniacal, or imbecile, and from the manner in which existing savage, barbarious or semi-civilized people treat their insane, we may ascertain ancient beliefs referring to them handed down to the present through ages by these non-progressives. Western

American Indians often abandon their senile demented as well as other infirm and aged relatives, to the wolves, and to die of hunger, thirst, and cold. Idiots are destroyed by them, but imbeciles and other insane are regarded as especially favored by the Great Spirit, and allowed to do as they please. Among Mohammedans generally great reverence is shown certain forms of insanity, amounting almost to worship. Nations in their evolution have oscillated between deification of the insane on the one hand, and extreme cruelty towards them on the other, and it is not so long ago that they were burned alive and drowned as witches or possessed, in our own country. There has been a great advance made in this century in our treatment of the insane. We have to congratulate ourselves that we no longer beat and chain them, we have ceased to treat them as brutes and as possessed by devils; they are now only regarded in law as criminals.

Chiarurugi, in Italy, and Pinel, in France, inaugurated the cessation of cruelties, and in 1839 Dr. John Conolly, of England, abolished all mechanical restraint. He wrote, "Indeed it would seem as if at the period from the middle to near the end of the last century, the superintendents of the insane had become frantic in cruelty from the impunity with which their despotism was attended. The first principle in the treatment of lunatics was fear, and the best means of producing fear was said to be punishment, and the best mode of punishment, stripes. By degrees restraint became more and more severe, and torture more and more ingenious. An unsuspecting patient was sometimes induced to walk across a treacherous floor, it gave way and he fell into a bath of surprise, and was there half drowned and half frightened to death. In some continental asylums the patients were chained in a well and the water was allowed gradually to ascend, in order to terrify the patient with the prospect of inevitable death. The melancholy were tossed about in machines constructed for the purpose, to induce them to take a natural interest in the affairs of life." At Bethlem, Conolly saw ten females chained by arms or legs to the wall, clad in rags and filth. He details many revolting scenes such as this, and concludes with the statement that the patient, who has created indescribable turmoil at home, when taken to an asylum conducted on good

principles, often becomes quite an altered person, disturbing nobody and behaving peaceably. Such sudden improvements certainly almost exceed belief, but the instances are not even rare. Every physician conversant with insanity has witnessed these marvelous metamorphoses many times. The European asylums underwent great changes for the better under Conolly and the Tuke family early in this century, but in the report of the Commissioners (Quincy, Hitchcock and Storer) on Insanity, to the Legislature of Massachusetts, (Pub. Doc., 1864, Senate, No. 72) almost similar brutalities were unearthed, and the *American Journal of Insanity* for January, 1865, details more horrors as occurring in two other States in the Union. While America has, in many respects, led the world to grander conceptions of liberty and humanity, our country has lagged behind the monarchical governments in the matter of humanity to the insane. Reform movements have sprung up in the Union, the most noted being headed by Miss Chevalier, an energetic, enthusiastic lady, who has done more good than many ponderous missionary boards. Maudsley sums up the present non-restraint measures as follows :

" Its principle is to avoid a meddlesome interference ; to make all the surroundings of the poor lunatic as tranquil, as orderly, as gentle as may be consistent with his proper care ; to counteract the commotion in him by the absence of commotion in what is around him. The lunatic cannot any more than the sane person resist the steady influence of his surroundings ; he assimilates them unconsciously, and they modify his character for good or for evil."

Herbert Spencer, who is a great advocate of kindness in the treatment of children, in " Social Statics " extends his views to treatment of the insane. " Let those who have no faith in any instrumentalities for the rule of human beings, save the stern will and the strong hand, enter the Hanwell Asylum for the Insane. Let all self-styled practical men, who, in their semi-savage theories, shower sarcasm upon the movements for peace, go and witness, to their confusion, how a thousand lunatics can be managed without the use of force. Let these sneerers at ' sentimentalisms ' reflect on the horrors of mad-houses as they used to be, where was weeping and wailing and gnashing of teeth, where

chains clanked dismally, and where the silence of the night was rent by shrieks that made the belated passer by hurry on shudderingly ; let them contrast with these horrors the calmness, the contentment, the tractability, the improved health of mind and body, and the not unfrequent recoveries, that have followed the abandonment of the strait-jacket regime, and then let them blush for their creed." Thanks to an awakened public interest, the non-restraint system is fast growing in favor all over this country, and asylums are beginning to vie with each other in making the surroundings of their unfortunate inmates pleasanter. Skillfulness is supplanting brutality in their control, and better results follow.

Intrinsic forces, such as a gradually introduced better class of managers ; and extrinsic forces, such as public opinion, investigations, and the growing inclination of the people to examine public institutions of the kind for themselves, are surely elevating matters. Wherever a pride is taken in bettering the condition of patients, visitors are sure to find pleasant receptions, and the more intelligent classes are especially welcome. Dr. Spray, the superintendent of our county asylum, extends to every one of you a standing invitation to inspect everything about that building, and it is your duty, as citizens, to acquaint yourselves with the status of such institutions.

Now, while the humanizing influences have worked their reforms, and trans-Atlantic examples have been followed to the extent of stopping brutalities, while crimes of commission are seldom heard of, crimes of omission prevail. There is much to be done before psychiatry in America will have approximated the high standing it enjoys in Germany, France, and England. Dr. Tilden, the superintendent of the California State Asylum, embodies in his report words that should be well weighed by legislators and the public of our entire country.

Speaking of his establishment, Dr. Tilden says : " Its beautiful edifice, its well cultivated yards and gardens, its wholesome food, its comfortable clothing, its scrupulously clean halls, rooms, beds, and bedding, its excellent police regulations, combine in making a prison of the first class ; and if such was the original purpose, I see not how it could have been more admirably accom-

plished. If, however, in creating a charity so munificent, so noble, it was intended to establish an asylum with hospital appliances for the *cure*, as well as the care and safe-keeping of the insane, I am free to say it is, in my opinion, a most signal failure. If there is any difference between it and a well conducted State prison, it is in favor of the latter, from the fact that means of employment are provided for its inmates, while the inmates of the asylum spend their days in idleness. It will hardly be contended, I think, that our newspapers and a little gymnasium, with a solitary swing in the female department, can give the asylum of California a claim to the character of a curative institution."

It is the avowed desire of the American Association of Superintendents of Hospitals for the Insane, to introduce improved curative measures into asylums as rapidly as possible, and to establish hospitals for the insane, instead of the old prison asylums.

Herbert Spencer points to the fact that all institutions grow, evolve; they cannot spring into existence. What is to be done must come about gradually, and fifty years hence, our present asylum jails will be considered only as improvements on the ancient slaughter-houses in which the insane were penned up.

The duties of a superintendent of an asylum are similar to those of the landlord of a giant hotel, and in addition, he is the principal medical officer, with often but one or two assistants, himself having immediate charge of a number of wards. With the multitude of details requiring supervision in great caravan-series, imagine Messrs. Palmer or Drake during a cholera epidemic, with their houses filled with sick and dying, compelled to act as medical supervisors. But, says everyone, this is easily enough remedied. Let a business man look after matters pertaining to the stewardship of the asylum, and allow the physicians their legitimate field and nothing more. The experience has been so often repeated, it is coming to be almost common knowledge that this system has invariably failed. There is not a movement; not an ounce of supplies purchased; not a turn of a wheel, but has direct reference to the welfare of the patients in the asylum. Who can possibly be so well informed as to the needs of the establishment as the superintendent, who so well able to direct

the movements of men, machinery, and supplies about the place as he? Introduce your business agent with his ideas, in nine cases out of ten antagonistic to the medical superintendent's, simply because he has not the same matters at heart, the same problems to solve, nor the least appreciation of whys and wherefores, and there is constant necessity for endless explanations, arguments, appeals, etc., whenever trifling, to say nothing of important, matters are at stake; or, what is more apt to take place, there are clashings of authority, and the disgusting bickerings of a house divided against itself. Every alienist of note has given his opinion that the superintendent of an asylum should be supreme in command in the asylum as to all persons and things, and that no one disloyal to him, be he officer or employe, should be allowed to remain an instant.

Too often it is the case that petty strife abounds in these places, and, as everywhere else in the world, intriguing for place, with its plexus of lies, recriminations, and plots occur. The lives of nearly everyone about in that event are embittered, and at best it is a difficult matter to reconcile the heterogeneous ways of thinking encountered in large asylums. A superintendent has to be naturally a large-minded man to escape the effects of constant contact with the littlenesses of others.

The individuality of a superintendent will tinge the entire place. If he is small, small will be his servants. If he is lazy or cruel, so will they be. If his views are large, and he possess a compassionate heart, and is determined to do his utmost for his patients, that spirit will pervade the house, from the second medical officer to the scullion.

There is no escape for the superintendent from the oversight of details, but the anxiety and time devoted to them could be transferred to more purely medical affairs by affording him all latitude in the employment of faithful assistants and the elimination by prompt discharge of the unfaithful. All this presupposes the chief officer to be himself well fitted for the place. The frequent changes made in these positions, and the selection of inexperienced persons, produces great confusion and invariable retrogression. In Europe, the appointment of a superintendent without previous asylum experience is unheard of. Positions are secure

from other than medical and moral considerations, and a liberty of action and opinion is engendered among physicians directly caring for the insane unknown in our country. Upon superannuation, after faithful service, these officers are pensioned by their governments. Where the tenure of office is uncertain, there is little incentive to honest work, and great temptations for intriguing on the part of outsiders to dispossess those in office, not from any medical, scientific, or philanthropic animus, but from mere place-hunting greed. Who can work with the calmness and peace of mind necessary to carry on complex professional duties over a volcano which any minute may explode into a financial wreck, utterly regardless of the years of study and the fortune one may have expended in fitting oneself for an especial field.

The prime causes of all these embarrassments in the way of psychiatry are mainly the crude ideas among the people, as exhibited in their laws regulating the arrest and custody of lunatics. The strangely erroneous notions of insanity extant originated and perpetuate a very defective jurisprudence. The insane must either be held responsible for his actions, or he must not be. If not, then the question arises, how much insanity is required to exempt one from the consequences of having committed a crime? The ability to distinguish right from wrong is no guide as to responsibility, for an epileptic may be at one time in full possession of his faculties, and at another absolutely unconscious of what he does, and epileptics afford us the most terrible form of mental alienation. The literature of this subject is abundant, but we may only glance at portions. The English law seems fair enough which places responsibility, if at the time of committing the offense the accused knew right from wrong, but in the determination of this point juries will hang the more insane, and let the less insane escape, often acquitting one and condemning another, both having the same form of insanity and degree of responsibility, and even the knowledge of right and wrong does not bear scientific scrutiny as a means of judging responsibility.

In the case of *State vs. Pike* Chief Justice Perley, of New Hampshire, instructed the jury that they should return a verdict of not guilty, "if the killing was the offspring of mental disease

in the defendant, that neither delusion, nor knowledge of right or wrong, nor design, or cunning in planning and executing the killing, and in escaping or avoiding detection, nor ability to recognize acquaintance, or to labor or transact business, or manage affairs, is, as a matter of law, a test of mental disease; but that all symptoms and all tests of mental disease are purely matters of fact to be determined by the jury." "A striking and conspicuous want of success," said Judge Doe in the same case, "has attended the efforts made to adjust the legal relations of mental disease. It was for a long time supposed that men, however insane, if they knew an act to be wrong, could refrain from doing it. But whether that suspicion is correct or not is a pure question of fact, in other words a medical supposition—in other words a medical theory. Whether it originated in the medical or any other profession, or in the general notions of mankind, is immaterial. It is as medical in its nature as the opposite theory. The knowledge test in all its forms and the delusion test are medical theories introduced in immature stages of science in the dim light of earlier times, and subsequently, upon more extensive observations and more critical examinations, repudiated by the medical profession. But legal tribunals have claimed these tests as immutable principles of law, and have fancied they were abundantly vindicated by a sweeping denunciation of medical theories, warning that this aggressive defense was an irresistible assault on their own position. In this manner opinions purely medical and pathological in their character, relating entirely to questions of fact and full of errors, as medical experts now testify, passed into books of law, and acquired the force of judicial decisions. Defective medical theories usurped the position of common law principles. Whether the old or the new medical theories are correct, is a question of fact for the jury. It is not the business of the court to know whether any of them are correct. The law does not change with every advance of science, nor does it maintain a fantastic consistency by adhering to medical mistakes which science has corrected. The legal principle, however much it may formerly have been obscured by pathological darkness and confusion, is that a product of mental disease is not a contract, a will, or a crime. It is often difficult to ascertain whether an in-

dividual has a mental disease, and whether an act was the product of that disease, but these difficulties arise from the nature of the facts to be investigated, and not from the law, they are practical difficulties to be solved by the jury, and not legal difficulties for the court."

In *State vs. Jones*, Judge Ladd, on the right and wrong test of responsibility, claimed that to be "an interference with the province of the jury and the enunciation of a proposition which in its essence is not law, and which could not in any view safely be given to the jury as a rule for their guidance, because, for aught we can know, it may be false in fact." These opinions are quoted as embodying most advanced views. Witchcraft was dealt with by the law much as insanity is to-day. The jury were given erroneous instructions on matters of fact under the name of law. Lord Hale decided that there were such creatures as witches, for the Scriptures had affirmed as much, the wisdom of all nations had provided laws against such persons, which is an argument of their confidence of such a crime. But the enlightened opinion of the country made the witch he condemned one of the last to be executed in England. As with witchcraft, so to-day with insanity, the judge instructs the jury wrongly on matters of fact, and the jury finds a verdict accordingly."

Judge Doe further said, "If the tests of insanity are matters of law, the practice of allowing experts to testify what they are should be discontinued; if they are matters of fact, the judge should no longer testify without being sworn as a witness and showing himself qualified to testify as an expert."

In *Boardman vs. Woodman* the same authority states, "If it is necessary that the law should entertain a single medical opinion concerning a single disease, it is not necessary that that opinion should be a cast-off theory of physicians of a former generation."

Expert testimony is another aggravating feature of law courts. As long as men are as they are, physicians as well as others will, for the sake of the fee, and without the least preparation or fitness, enter the courts as experts and pass upon subjects the nature, literature and facts of which they are ignorant; and again, men of special training will prostitute their calling by testifying with partisan zeal, suppressing the truth as they know it, and mislead-

ing the jury as to facts. This state of things should not be countenanced. The expert may coach a lawyer, but should not appear as a partisan. He should appear as an expert to tell the truth as he knows it, regardless of how it may affect the case. If his honest convictions are with one side or the other, he may be engaged by defendant or plaintiff; but having the confidential communications of one side, he may not subsequently appear against that side. And the presentation of the hypothetical case is not a correct method of eliciting the truth, for it is impossible to embody all the details necessary to a full understanding of the case by such means. Dr. Ray thought the expert should be asked, "Do you give your time and attention continuously to a particular branch of medicine, and is that mental, or psychological medicine? and that opinions should be given in writing, and read to the jury without oral examination. It would then be deliberately prepared, its explanations well considered, and its full force and bearings clearly discerned. It would go to the jury on its own merits, no advantage being gained by either party by the superior adroitness of counsel in embarrassing the witness and pushing his statement to a false or ridiculous conclusion." The animus of the expert, with his dishonesty or incompetence, would thus be disclosed.

The Illinois law provides that the sheriff, jailer or other suitable person may detain persons until trial. Both jailing and the trial by jury of the insane are processes unworthy a civilized age and people. The Board of State Charities takes proper ground in this matter, in its last report, as follows:

"Does not the uncertain condition in Illinois under our law demand a return to the common sense law, with modifications, once existing in this State, which virtually treated an insane person as mentally sick, and did not require him to be treated as a criminal and be tried by a jury? What good has been effected by the change in the law? We maintain that no good has been done, and that serious questions arise, clogging the individual's future, and also attaching more of a stigma, if such it be, of insanity by the finding of a jury. Why not leave the matter, as in many of our States in the United States and as in England, to be dealt with as a scientific, professional question for the medical

man and pathologist, and not for the finding by a verdict of jurors, based on slight evidence? Is it essential to liberty and to the maintaining of personal freedom from undue restraint, that the law should exist in its present form? A writ of *habeas corpus* will always lie as a writ of right to inquire into the cause of the detention of any party in an hospital for the sane or insane. It is believed by many that our present jury law was superinduced by undue excitement growing out of one case, which was by no means a clear case of misapplication of the rigor of the law. It is required that the near relatives (and when none exist, then a respectable person of the county) must petition for the trial of the person's sanity or insanity, and it is obvious from the law that the proceeding is for the welfare of the individual supposed to be insane. It is not a criminal charge, and yet you treat the matter with the formality of a charge or trial for crime; in place of having a commission or board of physicians, you try the person and render a verdict, from which you provide no escape by his individual act that would be legal."

The *Alienist and Neurologist*, in commenting on this, adds: "Let the law pile high the penalties for false certificates of insanity, and searchingly inquire as to the qualifications and responsibility of those who may sign them, but save the poor lunatic from the uncertain chances of speedy treatment through a petit jury trial."

The time lost during the jail incarceration, which might have been spent under hospital treatment, in many cases confirms the insanity for life, and every alienist knows the importance of prompt treatment in recently developed cases; frequently all that can be done is at the inception of the malady. Many of the insane dwell persistently upon these court proceedings, and their delusions are tinged with them.

Those with delusions of persecution frequently find confirmation of their fears in these trials and commitments, and some talk of but little else. Male case No. 212 and female case No. 263, at the County Asylum, are instances.

Investigations are being made to ascertain if insanity is increasing. In the present state of statistical information much can be said for and against such a conclusion. The apparent

increase may be due to more insane being registered now than formerly. In 1859, in England, the rate was 1 to 540; in 1876; 1 to 375. In the United States the census returns numbered 44,148 insane in 1870, the proportion being 1 insane to 953 of the entire population. California's proportion being 1 to 484. At the same time in England, it was 1 to 403; in France, 600; Scotland, 336; Ireland, 302; and Russia, 450. Farr states the rates for upper and middle classes in England are 1 to 484, and lower classes 1 to 353. While asylums show more females than males under treatment at a given time, there is actually more insanity among men everywhere than among women. The apparent anomaly is caused by the females being more capable of enduring an indoor life than the males, a larger part of whom either recover or die sooner than females, and consequently are present in less proportion.

As to causes of insanity, Dr. Funkelburg, of the Russian Public Health Commission, claims that in that country lack of intellectual culture, insufficient food, unhealthy dwellings, are causes, but abuse of alcoholic liquors sends 20 per cent. to asylums and 40 per cent. to jails.

Lord Shaftesbury, who was chief of the lunacy commission for fifty years, said that 50 per cent. of insanity in England was caused by intemperance. According to Lunier, 50 per cent. of the idiots and imbeciles in Europe had notoriously drunken parents. Michét figures hereditary influences as predisposing to one-half of all insane cases. Guslain claims heredity operative in 30 per cent. of cases, and Anstie ascribes the origin of heredity to want of education, mental vacuity, and excesses, particularly alcoholic. A good instance of the misery entailed by degraded ancestry is afforded by the Jukes family, of New York. Margaret Jukes, in six generations, had 709 descendants, all of whom were thieves and murderers or idiots. Exciting causes in one generation become predisposing in the next. Dr. Page, of the Connecticut (Hartford) Retreat, analyzed 2,333 cases, and found one-half due to causes largely under the control of man. Hereditary tendencies were at the bottom of most cases, the bad habits of parents becoming diseased conditions in the children. Head injuries and sunstrokes are prolific sources of insanities. Dis-

eases such a scarlatina, meningitis, small-pox, rheumatism, gout, lues, epilepsy, chorea, hysteria, predispose to and directly cause insanity. Pellagrous insanity is a form produced by eating diseased corn. Morphine, chloral, and other poisons sometimes cause loss of mentality. Emotionalism, such as is engendered by too much novel reading and failure to cultivate reasoning faculties, is a cause. Consanguineous marriages often predispose offspring to weak mental condition. Change of environment, domestic troubles and griefs, roughly estimated, cause 12 to 15 per cent., but preëxisting mental instability may be supposed in many such cases. The two extremes of mental stagnation with sensual degradation upon the one hand, and gloomy fanaticism on the other, and dwelling too long and intently upon religious questions, especially when presented in narrow and exclusive forms, drive to despair or perilous exaltation of the feelings.

It may be conceded that there is an absolute necessity for taking care of the insane, for society and individuals would suffer for want of protection against them if not for them. The altruism of this public charity is not so evident as its egoism. The assumed function of an asylum is for the care, and, if possible, cure of the insane; the State is not supposed to entomb every one admitted as hopelessly insane.

Thirty years ago, Dr. Forbes Winslow inveighed against the dogma pervading all grades of society, "Once insane, always insane." It is an enormous assumption, one of the lying old saws, which among unreflecting people is chargeable with having done much harm. Many patients recover from insanity never again to become insane. Many more are so far improved as to be of use in the care of other insane. Were this not the case the expenses of maintenance would be immensely greater than they are, for the work done by inmates is an important feature of the asylum. Are we justified in doing anything at all for the insane? Should they not be allowed to perish as rapidly as possible, without effort in their behalf? are questions a common humanity has answered by the establishment of asylums, and having thus answered, the care of these unfortunates must be advanced in keeping with the progress of knowledge, for neglect in part would justify neglect in toto, which is equivalent to asserting the right

of the State to destroy its lunatics. If a charity is worth carrying out at all, it is worth doing well. The falsehood that no one recovers from insanity has done its evil work, let the knowledge that many recover, and that the advance of medical science has rescued a still larger number, do its good work. If the plea is made that by this means hereditary taint is propagated, it may be shown that it as frequently prevents its propagation, and even granting it, failure to provide every reasonable means for cure and care may be extended to ordinary bodily diseases. All hospitals should be converted into tombs, medicine should be dismissed and phthisis, wounds, and every other ailment be allowed to run their course with the fatalistic justification of the Menonites. No help should be afforded the drowning man, his death will ensure the propagation of a more cautious race. One-half of the world is subject to inherited bodily taint, and an extension of the *laissez faire* of asylum treatment would justify one-half the world in destroying the other half, and destruction is the same in result, whether by direct or indirect means, by neglect or by assault.

Granting that the insane should be cared for, the accusation cannot be made that America does not house, clothe, warm, and feed them. The grand edifices for the purpose scattered throughout the Union testify that it does, but a great fault to be found is in want of organization and concert of action between legislative bodies having these matters in charge. Large dormitories prevail in European asylums in preference to numbers of small rooms, because experience has demonstrated their usefulness in the prevention of suicides, the prompt care of the sick, and the enhanced ability of a few persons in watching a large number of patients. Dr. Spray has recently introduced this feature in the County Asylum, and the cost of construction of asylums is greatly lessened, but in very few places is it in vogue in this country. In England, the corridor is only found in the antiquated asylums, but it exists without exception in all asylums here. Statistics fully prove that the best results, both as to recoveries and expense, are obtainable from a number of small asylums, with a capacity not exceeding 700 inmates, rather than from larger asylums, but the lesson is unheeded with us. Medical treatment becomes less

efficient to almost impossible the larger the asylum grows. In the European asylums, the history of each patient is carefully ascertained, and all ancestral peculiarities recorded. His condition and the treatment he undergoes are set down day by day till his death or discharge. With some noteworthy exceptions, this is not the rule in the United States. In many asylums, merely the name, age, dates of admission and discharge, only are recorded. A knowledge of the antecedents of a disease is so requisite to proper treatment, in the great majority of cases, as to make this neglect criminal, whether the fault of the State or of individuals. Across the sea, physicians are selected who have grown to eminence in the treatment of mental and nervous diseases, as officers for asylums. Treatment is based largely upon the conditions known to exist in the body of the patient; there are special forms in which, as yet, nothing but mitigating measures are justified, as in parietic dementia, which rarely, if ever, recovers, and while many other cases are hopeless, there are still many which become chronic only through failure to properly diagnose and institute prompt and suitable treatment. Many cases also recover where nothing has been done for them, and some even in spite of improper treatment, but this is no justification for withholding treatment. The same is true of all other diseases, and it is as necessary that the alienist should be well versed in his province of medicine, as any other specialist should be in his division, but special fitness is not a distinguishing characteristic of every American insane asylum physician, and if, through experience and much study, he has become an adept in this field, with corresponding loss of expertness in other branches of medicine, it often happens that in the rotation of office he must give place to some one else less versed in these matters, who must acquire his knowledge at the expense of many a patient's life.

An abstract of the methods used, and the principles governing the treatment of mental diseases, would be tedious reading to a popular audience. Suffice it to say that the bodily health must be maintained, and the circulation particularly regarded. Sometimes a slight scar will indicate a course of medicine the beneficial results of which may be predicted in nine cases out of ten. An injury to the head—frequently without visible evidence of it,

and only the history of the case as a guide—may justify a surgical operation, in the happy issue of which our literature abounds. Correction of some physical or moral vice, and educational measures which call into requisition latent reasoning powers, are often successful. Male cases Nos. 250, 227, 289 at the County Asylum are good examples of recent cures, which are, and may be, effected wherever the proper interest in a case exists, with sufficient knowledge on the part of the medical attendant. We may well ask, what is the cause of so much want of progress in our psychiatric affairs? Why is not legislation brought to bear upon the subject?

Those who believe that such things may be corrected by law would do well to consider an instance in point: The New York legislature had become fully impressed with the necessity for advancing the medical status of its asylums, and proceeded to equip one with all the paraphernalia of a pathological laboratory. About \$50,000 was expended in this way, a liberal salary was fixed for a pathologist, who was finally selected. He had never been heard of before; he was and is ignorant of medical matters, and since his incumbency has published at an expense of \$3,000 to the State plagiarised matter from the works of Rindfleisch, a German standard author on pathology.

The fault does not lie with legislatures, supervisors, superintendents, or the medical men of asylums that Europe is ahead of us in governmental fostering of such science. Some of the causes may be ascribable to conditions pointed out as likely to occur by Washington in his farewell address, but as this government is of the people and by the people, no one is to blame but the people themselves. A fountain cannot rise higher than its source. An aristocracy in Europe which, however, it may operate toward degrading the masses on the one hand, through its educational influences affiliates with and maintains fit men in professional State fields. While at home we escape the evil domination of monarchy, we cannot expect to find measures adopted and establishments reorganized on a basis which the people cannot understand.

So long as the populace know nothing of what has been accomplished by other nations in this field, so long will nothing be done to elevate the medical and scientific management of asylums.

As soon as the public grow to the requisite knowledge, an overturning of antiquated systems will proceed vigorously. The people of the State of Virginia, in 1882, were divided on a State debt issue. Among those who favored the payment of the debt were all the superintendents of asylums in the State, and they were summarily dismissed from office on the success of the repudiation measure. This was a popular judgment of unfitness to treat the insane. Herbert Spencer has said that America will give rise to the highest civilization the world has ever seen, nor need we think otherwise from the slow progress toward it in some directions. Changes for the better are being gradually made and will endure. Many fallacies have to be overcome, among them the ideas that it is better to neglect early treatment by delay in resorting to the asylum; that the stigma of insanity through asylum treatment is a greater calamity than the risk of perpetuating insanity through avoidance of asylum treatment; that jurors are more to be trusted than physicians, both as to knowledge of insanity and in matters requiring ordinary probity.

Society imposes a penalty upon efficiency in these abstract studies. If the student attend too closely to his work, his absorption and enthusiasm entail withdrawal from contact with the world at large, and its crude ideas as to how psychological problems should be dealt with. The world readily forgets those who are forgetting it, and however correct may be the student's methods, however conscientious and capable he may be in the performance of his duties, so long as the public is not educated up to his ideas he can expect no help from it. The general practitioner realizes that his chances for financial success are only through closing his books, forsaking his instruments of research, and cultivating so-called society, with its lap-dogs and small talk. A professional man is judged, as usually every one is judged, by the amount of money he obtains, notwithstanding the so well known fact that charlatanism invariably fattens where merit and skill may starve. As in every field of science, so it is in the psychiatric, the world has advanced through the misunderstood, often reviled, efforts of its underpaid, neglected searchers after truth. Emotionalism demands the strangling of the living Jenner for proposing to make us first cousins to cows, and rushes to the apotheosis of the dead

Jenner for his having while living conquered a terrible disease.

The superstition which regarded insanity as a penalty for sins and teleological doctrines engendered fatalistic views of insanity, and hindered rational methods of research by ignorantly declaring mental processes insoluble.

The prevalence of purely subjective methods of study of mental phenomena perpetuated false views, and obstructed physiological method, even though *mens sana in corpore sano* had become cant. It is coming to be generally realized that the laws of the mind are part and parcel with the laws that govern the universe; that physics is more useful in psychology than metaphysics, and that mentality may not be understood without a knowledge of the anatomy and physiology of the brain, no more than the horology of a clock may be grasped without knowledge of its mechanism.

But the laity cannot be blamed for want of information as to what has been accomplished toward clearing up these mysteries, while it is only within the past few years that these matters were taught in medical schools in America. Had there been as thorough instruction on these subjects in our medical schools, we would not see a dozen widely different forms of insanity sent to asylums as "softening of the brain." Some of the psychoses often erroneously included in this omnibus are curable.

The literature of alienistic knowledge is beginning to overflow from special repositories, such as the *Journal of Mental Science*, *Journal of Nervous and Mental Disease*, *Journal of Neurology and Psychiatry*, and *Alienist and Neurologist* into general medical periodicals. There is enough definiteness now about what is known of insanity to make it incumbent upon the general practitioner to apprise himself of what is known particularly as the family physician is usually the first one called in the incipency of, and best time to properly treat, the mental complaint. It will not be necessary for him to dive into the minutiae and polemics of psychiatry, but when asylum treatment is not available, problems as grave as are presented by great hæmorrhage, collapse, or pernicious fevers appear with the advent of mental derangement, and timely, judicious control may often restore reason.

So far as money can accomplish anything, it has been lavished by Europe upon psychiatric problems. Vienna, Paris, London, Rome and Florence are prominent as centers of research. Nor has there been want of previous special training to fit the physicians there who lead in these matters. They are educated with special reference to physiological research. Not only the anatomy of man, but that of the lower animals is being worked out microscopically; the intricate mechanism of the nervous system is gradually being disentangled; the dynamics of life are being delved into, and many workers in special fields are contributing to synthetical knowledge, which is rapidly growing in exactness.

In subsidiary fields physiological chemistry has its Gamgee; biology its Huxley and Hæckel; minute anatomy its Meynert; vivisectional experimentation its Fritsch, Hitzig and Ferrier; pathology its Exner, as foremost representatives of a host of explorers, who work with scalpel, microscope, electrical apparatus and other scientific appliances year after year in the light afforded by Darwin and Spencer. Clinical observations are made by Hughlings-Jackson, Charcot, Maudsley, Brown-Sequard, and all the asylum officers in Europe, and a number of them on our side of the Atlantic. Among our native workers outside of asylums, we have Hammond, Spitzka, Kiernan, Mills, Wood, McBride, Schmidt, Jewell, Brower, Seguin, Morton, Hughes, and others.

As an illustration of one of the multitude of methods, Exner's process may be mentioned. From 2,000 cases of diseased conditions found in different parts of the brain, patiently and logically examined, in connection with the accompanying peculiarities exhibited by each patient before death, he has formulated laws which go to supplement the localization of function in the brain, and show us that while various parts of the brain are absolute centers for the movement of particular groups of bodily muscles, relative centers exist also for these same muscles in other parts of the brain. A flood of light was let in at once upon many apparently contradictory phenomena, and methods of observation have been correspondingly improved. The Italian Golgi, by an improved process of staining, has enabled us to trace out hitherto unrecognizable microscopic connections of nerve

fibers. The importance of this may be understood by regarding the nerves as so many telegraph lines between certain stations, whose connection with each other must be ascertained before cause and effect can be affirmed. When the mechanism and the forces at work are both better understood, related phenomena are correspondingly better known.

The tendency of modern research is to show that the circulation of the blood plays a very important part in mental workings, and that upon the integrity of minute blood-vessels the mind depends for its existence, as much as upon the nerve cells and fibers the vascular system nourishes, and as Morel states, that "the brain is always the seat of the insanity, but not always the seat of its cause."

Some of the problems undergoing discussion by alienists are: Why are more of one nation than of another insane? What especially induces insanity? What temperaments are most predisposed? The precise defects in the organism which accompany insanity. How those predisposed to insanity may avoid it. The proper treatment of all kinds of insanity. How far treatment is serviceable. The prevention of insanity and its reduction to a minimum. These and kindred inquiries befit a social arrangement which, as Spencer says, survives only on condition that each generation of its members shall yield to the next benefits equivalent to those it has received from the last. The well being of each is involved in the well being of all. Whatever conduces to their vigor concerns you, for it diminishes the cost of everything you buy. Whatever conduces to their freedom from disease concerns you, for it diminishes your own liability to disease. Whatever raises their intelligence concerns you, for inconveniences are daily entailed on you by others' ignorance or folly. Whatever raises their moral characters concerns you, for at every turn you suffer from the average unconscientiousness."

To this end the medical and scientific standards of American asylums should be raised to that existing abroad. If there is justification in caring for and treating the insane at all, there is equal justification for the reduction of the study to a science that will tend toward obliterating as much insanity as lies in our power, and we may expect much from a people who work indus-

triously in every field recognized as a paying one. It is as much the duty of a nation to explore the causes of diseased bodily conditions of its individuals, as it is to survey its lands geodetically or geologically, or with reference to its flora and fauna, and ultimately the information elicited by such explorations would be diffused among and benefit the people. Our County Asylum, thanks to the intelligence of the Commissioners, ranks with the advancing condition of alienistic matters in the Union. Voluminous case books are being filled there day by day with the progress of each case, the results being communicated through medical journals, with pathological and microscopical details, in connection with all that can be learned concerning the patient. American asylums generally are gradually increasing their medical assistance.

The visiting physician system, as formerly organized, has proved valueless. The State should employ well recognized skilled specialists, in addition to the regular resident physicians. By recognition is meant repute among reputable physicians. What has the specialist accomplished? what does he know? should be the questions of fitness, and the superintendent of the asylum should be untrammelled in his selection and dismissal of these specialists. The same objections to having business interferences with the superintendent, apply with equal force to his contact with coadjutors.

The resident staff for a 500 population asylum should consist of medical superintendent, three assistant physicians, one pathologist, one female physician as gynæcologist, one clinical clerk. A consulting staff to visit the patients weekly, or as suggested by the superintendent, to consist of one specialist in skin diseases, one eye and ear physician, one surgeon. Internes could be selected from medical schools among those wishing to fit themselves in psychiatry, and the clinical clerk is in Europe selected on that basis. There need be no fear of increased expense in such an arrangement, for the consulting staff would serve for the honor of the positions, and internes receive no salaries from any hospital fund. The additional cost for board of the extra medical men could be afforded for ten years by one year's curtailment

of unnecessary building details. Millions of dollars are expended in unwise architecture absolutely lost by the necessity for being undone in time. At Danvers, Massachusetts, a palace asylum was undergoing construction, while the insane of the State awaiting its completion starved and were frozen in dungeons of almshouses, and were without any medical attendance. This was before Gov. Butler's day. It is evident from such instances that mere desire for display was at the bottom of the erection of a grand asylum, and that no question of benefiting the prospective inmates by medical or any other treatment entered into the intentions of its founders. Can economy be said to have justified this condition of things?

The coming century will witness as great an advance in the methods of treating the insane as this century has surpassed the eighteenth in their treatment. The time is coming when, instead of millions being expended for palatial asylums, a few thousands will suffice for comfortable hospital construction, and the surplus be expended in curative measures, and in the search for the causes and the means for prevention of insanity. Asylum officials will be selected through special fitness for their vocations. Instead of its being as much as one's position was worth to ask for a post-mortem case of instruments, every hospital for the insane will become the nucleus of a busy faculty of investigators, and even six months work on the part of a competent physician will not be considered too much to devote to a single post-mortem investigation, with the occasional result of producing a Virchow, who could see more in a pathological specimen in one day than multitudes of other observers in a lifetime. The methods of research have been established, the course to pursue to arrive at definite results is now known, and the means and workmen are coming, for with the dawn of the twentieth century the exactness of the knowledge already evoked will have advanced by that time to an extent that will open the eyes of the meanest of the multitude to the necessity for more thorough investigation, not only of the brain, but of the entire body in connection with the *intra viam* history. There is nothing like the realization that a thing *pays* in America to induce activity.

"To tell whither a measure is drifting, it is important to take

as data for sociological conclusions not the brief sequences, but the sequences that extend over centuries or are traceable throughout civilization," says Spencer. From brutality in the treatment of the insane in the past we have advanced to kindness, and the tendencies are toward a more careful study of the causes and means of prevention of insanity. The immediate effect being an amelioration of the condition of patients living, with the acquisition of ability to combat the causes of, and to prevent insanity in generations unborn.

ACTINOMYCOSIS DISCOVERED IN AMERICAN CATTLE.—Dr. William T. Belfield, of Chicago, has made the important discovery that actinomycosis exists in American cattle. He was asked by the Commissioner of Health of Chicago to investigate a disease in cattle which has generally been known as "swell-head," and has been called by veterinarians, Cancer, Sarcoma, etc. Five animals were examined by Dr. Belfield, and a very short study of the specimens under the microscope revealed the true nature of the disease. Actinomycosis was only recognized six weeks ago by Bollinger, of Munich, who announced that it was a parasitic disease due to the presence of a rapidly growing fungus. It has since been discovered in the hog and in man. It generally first attacks the jaws, and probably gains access to the deeper tissues through carious or defective teeth. It spreads into the tissues of the head, causing tumefactions, suppuration, finally, if unchecked, pyæmia, and death. It may gain the blood and be transferred to other parts of the body. This happens especially with man, upon whom the parasite acts most virulently. It is supposed that its source is the grain with which animals are fed. The disease is generally fatal, though prompt measures may check it. The meat of animals dying from actinomycosis is not of first quality. It is not, however, yet known that it is absolutely injurious. Thorough cooking, at any rate, destroys the parasite. Dr. Belfield's discovery is an important one; and should become promptly known to veterinarians and sanitary officials.—*New York Medical Record*, Dec. 8, 1883.

Society Reports.

CONCERTED ACTION BY STATE BOARDS OF HEALTH.

[Reported for the CHICAGO MEDICAL JOURNAL AND EXAMINER.]

There has been a growing conviction among leading sanitarians intrusted with the official execution of practical health measures, that while the work of the American Public Health Association is of inestimable value in promoting the interests of sanitary science and sanitary reform, there is a constantly increasing need for an annual conference of State and other health officials in regard to practical affairs of their everyday work, some part of which work cannot profitably be discussed in a public meeting consisting largely of persons not familiar with its details.

After due consideration, a meeting of representatives of State Boards was held at Detroit during the recent meeting of the American Public Health Association, at which, after discussion, it was decided to call a meeting of the secretaries or other representatives of all State Boards of Health, in Washington, during May, 1884, for the purposes mentioned, and with the view of organizing a section devoted to State Board work in the present Association, or the formation of a permanent separate organization especially adapted to the needs of State Boards of Health. Drs. Henry B. Baker, of Michigan, and J. N. McCormack, of Kentucky, were appointed a committee to confer with and secure the coöperation of all the State Boards in fulfilling the object of the meeting, and Drs. C. W. Chamberlain, of Connecticut, J. E. Reeves, of West Virginia, and Stephen Smith, of New York, were appointed a committee on organization, to report at the meet-

ing in May. The American Medical Association meets in Washington in May; and another reason for holding the meeting in Washington, is that the representatives of the State Boards may also have an opportunity for conferring with the Senators and Representatives in Congress from their respective States, in regard to national sanitary legislation. It would seem that whenever the health authorities of all the States shall meet, discuss, and agree upon the course they will pursue with respect to yellow fever, cholera, small-pox, or any disease which endangers public health without regard to State lines or borders, and whenever all State Boards shall act in concert, considerable progress will have been made in solving the problem of what are the best methods for national action in regard to inter-State and maritime quarantine, or inspection and disinfection, as well as in the practical control of epidemic diseases within the several States of this country.

CHICAGO MEDICAL SOCIETY.

The Chicago Medical Society held a well attended meeting on the evening of November 5, and listened to the reading of an able paper by Dr. A. Reeves Jackson on the question, "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" The paper is essentially the same as presented by the author at a recent meeting of the American Gynæcological Society, and synopsized briefly is as follows:

"Diagnosis of uterine cancer cannot be made sufficiently early to ensure its complete removal by extirpation of the uterus. When the diagnosis can be established there is no reasonable hope for a radical cure, and other methods of treatment, far less dangerous than excision of the entire organ, are equally as effectual in ameliorating suffering, retarding the progress of the disease, and prolonging life. Extirpation of the cancerous uterus is a highly dangerous operation, and neither lessens suffering, except in those whom it kills, nor gives reasonable promise of permanent cure in those who recover. Hence it fails in all the essentials of a beneficial operative procedure, and should not be adopted in modern

surgery. The growing tendency to bold, fearless—may I not say reckless—progressiveness in the surgical branches of our profession, would have appalled our predecessors. When we consider that some of these achievements are scarcely more than ante-mortem examinations, whose chief usefulness consists in demonstrating how long their owners are able to survive the loss of certain bodily organs, we ask whether there is to be any limit to these exhibitions of surgical temerity? The removal of the whole uterus is not a very novel operation. Andreas A. Cruce removed the organ per vaginam for scirrhus in 1560. Similar operations were done in the eighteenth century by Wrisburg and by Monteggia. Blundell operated in three cases in 1828, two of the patients dying, and one surviving a year, and finally dying from a recurrence of the disease.

“ In 1878 Prof. W. A. Freund reported a new method, under proper antiseptic precautions, whereby the uterus could be, as he thought, more safely removed than hitherto. In the early part of 1879 he had operated in ten cases, with the result of five deaths and five recoveries; and in September of that year, at the International Medical Congress at Amsterdam, he reported four additional cases of his own. In one of these, the operation was unfinished; the other three were fatal. A later table of operations by Freund's method has appeared, including 91 cases, of which 66 died; 25 recovered; mortality, 72.5 per cent. Yet at the London Congress, Freund made the astounding statement that the operation may be undertaken as a not very dangerous one in the early stages of sarcoma and carcinoma, in which it gives promise of a radical cure. In consequence of the frightful mortality following the abdominal method, Czerny, Schroeder, Martin and others have practiced the removal of the uterus by the vagina, and thus far with better results. A table compiled by Sanger (*Archiv fur Gynakologie*, Berlin, 1883) includes 143 patients, of whom 72 per cent. recovered and 28 per cent. died. Extirpation of the uterus for cancer does not save, but destroys life. In order to show how much life has been sacrificed by it, I accept all the known fatal operations as the full number, although it is certain that there have been many more. They amount to 157 cases, 97 by the abdominal and 60 by the vaginal method.

If we grant that in all these cases the disease affected the cervix, and that the average length would be seventeen months, the calculation would show more than 222 years of life—over two centuries—sacrificed by the operation. If we consider that in many of the cases the disease affected the corpus uteri, as it surely did, in which the average duration of life is two and a half years, the aggregate amount of life destroyed would be even greater. But the writer is assured that 70 per cent. of lives are destroyed within a few hours, and 50 to 75 per cent. of the number that survive the operation, die from recurrence of the disease within a few months, and the few others who apparently receive benefit from an operation die as soon as though no operation had been performed."

In the discussion, in which quite a number participated, Dr. E. Andrews asked if the tumors of the cervix alluded to in the paper, were the scirrhus or epithelial form? Bilroth reports 11 per cent. of removal of tumors from the breast, and 33 per cent. of the lips and rectum, are successful if they are epithelial in nature.

Dr. W. E. Clarke said in his experience all patients operated upon in the cervix died within a year. One case of removal of a breast, he said, was done in 1861, and the lady recovered and remained so for nineteen years, but two years ago died of the disease. In his observation of 16 cases of amputation of the breast, all died.

Dr. R. H. Engert reported a case of cancer of the anterior lip of the cervix operated upon three years ago. The patient recovered, and at present there is no recurrence of the disease.

Dr. E. C. Dudley agreed with the essayist but thought cancer might and ought to be removed when it appears in other parts of the body, and recited a case he operated on four years ago of a cancerous tumor of the pelvis. The patient is a friend of his family, and there is no sign of a recurrence of the disease. The tumor was at once (directly after removal) examined with a microscope, and cancer cells were discovered in abundance. Some tumors occupy the middle ground bordering on the malignant, and yet they are benign. Another case he cited was where the tumor had ruptured five times in the peritoneal cavity, bring-

ing on peritonitis each time. He operated, and applied thirty to forty ligatures. He used antiseptic precautions, and she recovered. This tumor was a cyst, containing a great deal of solid tissue. It was an ovarian tumor, and yet it was what might be called an endogenous cancer. The patient was operated on three years ago, and she is in perfect health to-day; and it appears to be a permanent cure, at least it is so up to this date. But if the neighboring glands are involved, as the breast and axilla and under the clavicle, then it is a serious question about operating with a hope of cure. The uterus offers a very unpromising field for operating or extirpation, as all patients die. As the fallopian tubes are a part of the uterus, and these are not removed in operations for sarcoma of the uterus, we should not decide positively no to.

Dr. G. C. Paoli had seen many operations of this kind; two were in Ohio, and one in Chicago; some died before the operation was completed; some died in a few days, and one lived six weeks. In cancer of the breast, sometimes the tumors are proved to be fibrous; he had seen two cases of this variety in the hospital in his native country, and they both recovered, and the surgeon acknowledged them to be fibrous in character, but in true cancer it is sure to return, either of the breast or the uterus.

Dr. R. H. Engert said if a tumor of the breast is decidedly pronounced to be a cancer, she would have it operated upon and removed.

Dr. A. H. Tagert spoke of a case operated on for removal of cancer of the breast twelve years ago, and the patient is living in this city, and with no appearance of the disease returning.

Dr. D. T. Nelson hardly coincided with the sweeping statement of the paper. He thinks there is a border line between the severely malignant, or epithelioma, and sarcoma. He would operate upon sarcoma, and thought possibly it would not return, but in carcinoma, he thought there was little hope of its not returning, when removed by the knife. He thinks this disease begins as a local disease at first, and if we could diagnosticate the case early, we might operate, and if it is sarcoma, it might sometimes be cured.

Spencer Wells, up to 1881, had never operated upon a carcinomatous uterus.

Dr. Williams thought we should remove the cervix, and so much of the cervix and body of the womb as we can see to be involved, then treat the wound with bromine. He reported that some cases recovered. The vaginal method is the safest, and offers greater permanency of cure, but the broad ligaments are left in operating, so, if we can diagnose the case early, we are justified in removing it. One case of a cancer of the breast removed ten years ago, and the lady is now living. Another case was that of a soldier, whose axillary glands were deeply involved, also the artery. The surgeons desisted from cutting deeper, for fear of death. Hospital gangrene set in, the parts sloughed off, and the man was for two years afterward in the invalid corps performing duty, and he thought, in operations for either epithelioma or sarcoma, that the chance for recovery was more favorable than that of carcinoma.

Dr. Jackson, in closing the discussion, said he feared, from some of the remarks that had been made, that he had failed to make himself understood. He believed in the local origin of cancer, and believed in its removal, if removal be possible. He objected, however, to operations which destroy more than 50 per cent. of lives, and which experience has shown do not remove the disease in the cases of those who recover. In operations for cancer, the object is not to remove a mammary gland, a pylorus, or a uterus—it is to cure a *disease*; and if this be not done, the operation is a failure. It has not done what it aimed to do, and it is none the less a failure because the patient may survive without the ablated organ for a few weeks or a few months. He had only discussed the question as to the feasibility of extirpation of the entire uterus for cancerous disease, an operation shown to be much more dangerous than the disease itself. He approved of the minor and safer methods—the curette, cautery, caustics, vaginal or supra-vaginal amputation, etc., because they were capable of doing all that could be usefully done by total excision, with comparatively little danger to life. In conclusion, he would mention a fact that was rather humiliating to surgeons, namely, that the greatest success in removal of the uterus had been ob-

tained by midwives. There were on record no less than six cases in which that organ had been forcibly dragged from the pelvis, with but a single death.

At the same meeting, Dr. J. Elliott Colburn read an interesting paper on the "Treatment of Trichiasis by Electrolysis," which was of much interest to ophthalmologists. He has treated 54 cases by this method at the Eye and Ear Infirmary and Central Free Dispensary, during the past six months, with decided improvement in about every case. The subject, while not of great interest to the general practitioner, is none the less valuable, as the many points of interest it contained are a fund of information to those making diseases of the eye a specialty; even by those specialists the operation has not been extensively practiced.

There was considerable discussion on the subject of the formation of a "Nucleus for a Medical Library." A surplus of \$500 was in the treasury of the society, which might be appropriated at once for this purpose. Further discussion was postponed, but no doubt this scheme will meet with an affirmative vote ere long.

The society adjourned at a late hour.

L. H. M.

The Chicago Medical Society held a regular semi-monthly meeting on the evening of December 17, 1883.

Dr. D. W. Graham presided. The scientific business transacted consisted in a disposal of two papers. The first being a paper on "Alveolar Abscess opening into the Antrum and Nasal Cavity, Simulating Chronic Nasal Catarrh," was read by Dr. John S. Marshall. It contained the following points of interest, regarding the origin and causes of ozæna, namely syphilis, struma, lupus, ulceration, caries of the bones or cartilages, inflammation of the mucous membrane of the frontal and maxillary sinuses, and alveolar abscess opening into the antrum of Highmore or the nasal cavity direct.

The origin of certain forms of chronic nasal catarrh with fetid muco-purulent discharges is not always easy to locate, and espe-

cially is this true if the latter enumerated cause is the primary seat of trouble, and opens into the maxillary sinus. Abscesses forming at the apex of the roots of the superior incisor teeth, bicusps, or molars, may discharge into the cavities of the antrum, or nasal fossa, and range from a slight nasal discharge to a most offensive ozæna, and it is not at all uncommon to find the roots of the superior molars penetrating the maxillary sinus. Less frequently, however, the bony plate over the apex of the incisors may likewise give way, especially over the apex of the central incisor, this may occur and an offensive discharge into the nasal passages or posterior nares may so closely simulate chronic nasal catarrh as to entirely mislead the most careful diagnostician, whereas the real source of trouble may be a diseased tooth. During the past three years the writer has seen two patients, who were suffering from this form of disease, who had been treated for months as cases of chronic nasal catarrh. The sphenoidal and frontal sinuses and the maxillary antrum may each be the seat of this morbid condition and fetid discharges from the nasal passages be the result, i. e. of the accumulation of the morbid products in the accessory cavity, which becomes distended, and the overflow escapes from the little orifice into the nasal cavity. Text-books allude to this disease in a mere paragraph sometimes, and undoubtedly the subject deserves more attention than has hitherto been given to it.

Antral abscess is a much more serious difficulty than the affection just described, the former causing, at its inception, rigors and fever, and involves much more of the adjacent structures, periosteum, etc. In antral abscess the pus may be retained between the periosteum and the bone, causing absorption of the walls of the antrum, and may open into the mouth, orbit, or through the external surface, and cause hideous deformity, or extensive necrosis of the maxilla often follows, and it may extend to the ethmoid, lachrymal, palatine, and inferior turbinated bones, with cerebral abscess, unless early recognized and interfered with by surgical means.

When a dental abscess opens into the maxillary sinus, there may be danger of septic poisoning if the secretions become foul and no other outlet is present. If this should occur it will be

attended, of course, by serious constitutional symptoms. When it escapes into the nose the discharge will be unilateral, in its always being from the same nostril, and most abundant when a patient is lying upon the opposite side.

After the cases, with the symptoms, history, etc., had been cited, the paper concluded with the treatment, which consists in syringing the cavity of a tooth and the abscess through the pulp canal with warm carbolized water, 2 grs. to the ounce, once daily, and packing the tooth with carbolized cotton, and sealing it in with gutta percha stopping to exclude external moisture. Sometimes the buccal roots can be explored with a fine probe, by passing it upwards for an inch or inch and three-quarters. Water can be thrown into the antrum of Highmore through the roots of the teeth, and the fluid will escape into the nose. A tooth always needs to be extracted, if it is not already absent. Then we will discover, most likely, the pus escaping into the mouth through the alveoli, and that the ends of the buccal roots are somewhat rough, and portions already have been removed by absorption. A few weeks' time of treatment usually results most satisfactory.

The paper elicited considerable discussion. Dr. T. W. Brophy said that he had seen and treated a great many cases similar to those cited by the writer of the paper, that had previously been treated by physicians for post nasal catarrh; he also illustrated his remarks by giving a method by which he was treating a case at present, and draining the antrum through an opening into the mouth by a metal tube or canula. The patient has been under his observation for ten months, and was for four months previously treated for the nasal difficulty alone by a physician having a large practice. The case is now almost entirely well. I think the discharge of pus into the nasal cavity occurs more frequently from the incisor teeth than from the molars, and necrosis frequently results from the alveolar abscess that at first has formed at the roots of the teeth, and sometimes involves the entire upper maxilla. He was much pleased with the paper, and had been much interested thereby.

Dr. Edmund Andrews inquired of the author what form of

syringe he used in treating this class of cases, and what form of point the syringe had.

Dr. W. W. Allport stated that the paper presented by Dr. Marshall was well prepared and timely. That similar cases to those mentioned by him do sometimes occur, there is no doubt, but not so frequently that any one individual sees and treats a great many of them, as Dr. Brophy states he has done. I think that I am an ordinarily careful observer, but during my thirty-five years of practice I have seen but very few of such cases, not to exceed five or six, and I can hardly see how it is that any one man has treated so many cases similar to those mentioned in the paper, as the gentleman preceding me would have us infer that he has. Dentists frequently have fistulous openings and occasionally a diseased antrum to treat, caused by alveolar abscess. But alveolar abscess simulating nasal catarrh is met with but seldom, and I think Dr. Brophy has misunderstood the idea conveyed in the paper.

Dr. Robert Tilley stated that he had treated catarrhal troubles of the ear that had been primarily connected with the teeth, but a case had never occurred in his practice of catarrh of the nose originating from the teeth where perforation had occurred, as was described in the paper, and he took pains to examine the teeth and mouth carefully in making his diagnosis. He would like to inquire, without naming any one, if dentists had ever tried using the remedy peroxide of Hydrogen in "syrringing out" this kind of pus cavity? He knew it to be an efficacious remedy for dentists to use, and suggested it as a valuable agent in the treatment of alveolar abscess. It consists of twelve volumes of oxygen in solution, and is used in full strength by oculists in Paris in treating eye affections, and he presumed it could be used in the same strength in treating these abscesses.

Dr. Brophy arose to add to his former remarks that he did not wish to be understood as saying boastfully that he had seen more cases of alveolar abscess than other dentists, as might be inferred from the remarks of one of the gentlemen who had the floor a few moments ago. He, however, would verify the statement he made at the beginning of the discussion: That he had met with a goodly number of cases of this variety, and he would at an early

period present a paper on this subject before this society, which he would be pleased to do as soon as he can have the drawings made to illustrate the facts.

Dr. Allport said, regarding the use of peroxide of hydrogen, it is coming into general use by dentists. He knows it to be an exceedingly useful remedy as he has practiced using it a good deal, and concluded by saying: The author of the paper he thought, had ably called attention to an important subject this evening, one that is generally overlooked in diagnosing nasal catarrh.

Dr. Marshall closed the discussion by describing the kind of syringe used, as one speaker had inquired about, by saying it was the ordinary dental syringe fitted with a flexible metal point. stated that the peroxide of hydrogen is in general use, although he had not used the remedy in the treatment of this class of cases; but certainly should regard it to be quite valuable in the treatment of blind alveolar abscesses. Regarding the cases he had reported he said they had previously been under the observation of intelligent and well educated physicians. The object of the paper was to call the attention especially of the medical profession to one of the most obscure causes of foetid nasal catarrh—a cause which in a majority of cases he thought was overlooked by physicians.

The following is the substance of a paper presented by Dr. Wm. L. Axford, on "Packing-House Wounds," from observations he made during the past three years. This interesting and important topic was attentively heard, for it involves our attention as surgeons in considering the best methods to secure primary union in wounds which admit of the possibility of such union, and the execrable manner in which this class of incised wounds heal, though cleanly cut by the knives that are used in packing-houses, and the bad consequences ensuing from very slight wounds on the hands and forearm, oftentimes amounting to a mere scratch, are familiar to many of you. and the sequelæ following are in proportion to the depth of the wound, for when the skin has been cut through and the cellular tissue opened, an intense cellulitis, terminating in the formation of large quantities of pus, requiring free incisions has been almost

invariably the result. From a small cut in the back of the hand, a cellulitis extending half way up the forearm is not an uncommon result, and cases under observation have occurred where the inflammation extended to the elbow. If the sheath of a tendon be opened, or the tendon cut, sloughing is the usual termination. If the wound extends deeper, and the periosteum be cut, nearly every case will be followed by periostitis with necrosis. The cause must, of course, be the septic material conveyed into the wound from knives used daily in cutting meat, which, probably, are rarely cleaned with care, and never disinfected, although they may be ground and washed daily. Wounds are of daily occurrence at some of these large houses, and from past experience I am led to think that we may expect the worst consequences to follow from the knives used by "shavers," *i. e.*, those employed in removing the finer hair from the bodies of the animals after they have passed through the "scraping machines," (the "American hog," of course, being the animal alluded to that undergoes this sudden and complete metamorphosis.)

The wounds seem to pursue the same destructive tendency and resist antiseptic measures, as if no treatment were adopted. The treatment of wounds of this nature is, when necessary, to approximate the edges with sutures, then using freely either carbolic acid, solutions of encalypsol, or iodoform, all of which have been tried. Still union by the first intention has never yet occurred in the practice of the writer. A better plan might be to put aside the idea of securing union by the first intention, which is but problematical, and direct our measures towards preventing the inflammatory consequence by arresting the spread of the septic through the tissues, or, in other words, treat these cuts from the first as poisonous wounds, and try to prevent the further invasion of the septic material. To do so, if called immediately, apply thoroughly to the cut the actual cautery as the best means of destroying the poison. This heroic method, the writer is convinced, will diminish the suffering of a patient, and lessen the actual inconvenience so far as time of recovery goes. Perhaps, if we inject antiseptics, such as carbolic acid, tincture of iodine, or other solutions into the tissues about the wound they might take the place of the actual cautery, but their efficacy as adju-

vants to the treatment by the cautery in fresh wounds can be better tested by using them after the more heroic method of searing the surface first has been done.

If, however, some time has elapsed since the injury before we are called, it would be more advisable to dispense with the cautery and trust entirely to the injections, and environ the wound by a layer of some reliable antiseptic dressing.

Among those who discussed the paper was Dr. E. Andrews, who stated that he was frequently called to attend severe cases, the result of so-called "packing-house wounds." Some patients are more violently poisoned than others; he recalled a case of a man whose foot had been injured by a machine that is used in an "offal factory" to grind the bones of the animals slaughtered there, and the man's foot was completely destroyed. The leg was at once amputated, but in twelve hours the flaps mortified, and the lower half of the thigh was distended with gas; in another twelve hours the entire thigh was tympanitic, and in a few hours more the man died, not so much from shock as from being poisoned to death. Another case he saw was where a man had been cut by a cleaver (used in packing-houses) on the lower portion of the "shin"; it pursued the same course to a fatal termination. The juices that oozed from the stump after he amputated the leg contained large numbers of bacteria, and the case presented what he termed septicæmia with a vengeance. He also gave the history of a third case with the same final disastrous result—death. Some authors termed this traumatic gangrene, others, *gangrena septica*. It is a virus, but I do not think many of the hogs have this virus.

Dr. Robert Tilley thought that no advantage could be gained by using a cautery in these cases if amputation proved to be of no avail, and he thought a simple hot poultice would be the better method to destroy the septicism, because bacteria do not thrive at a temperature a little above that of the body, or to keep a hot appliance continually to the wound. He had treated a number of cases of wounds received in soap factories, none of which had septicæmia.

Dr. Graham had seen a number of chronic cases of the kind of which the paper treated, and thought part of the virulence

is due to the way this class of people live, as they live in a vitiated atmosphere at their homes, also the peculiar modes of the individuals in their hygienic care of themselves.

Dr. Axford thinks the cause of these poisonings is due to the knife being dipped in blood nearly constantly by butchers, and it instead of the hog, is the carrier of the virulence, at least in most of the cases; he is assured of this, and we should be on the alert for the after consequences which are most sure to arise, as he is convinced that every man wounded at these places by the knives used there, is actually poisoned.

L. H. M.

DR. HORATIO C. WOOD has at length severed his connection with the *Philadelphia Medical Times*, and its management now falls into the hands of Dr. Frank P. Woodbury, of Philadelphia. Dr. Woodbury is well known to the profession of the country at large as a gentleman who by education and experience as a journalist, is well qualified to sustain the duties which his distinguished predecessor has laid upon his shoulders. The *Philadelphia Medical Times* is one of the most valuable of American medical journals, not merely in the excellence of the editorial work it betrays, but in the character of those who contribute to its columns.

THE PREVENTION OF HORSE ACCIDENTS.—Mr. C. C. Baird, of the Dick Veterinary College, Edinburgh, has invented an india-rubber frog-pad for fitting into the heels of the shoes of horses, with the view of preventing the animals from slipping and falling on the causeway. The invention is exceedingly simple, and will be of great value to medical men and others who drive horses, especially on asphalt and in frosty weather. The pad can be removed in the evening and replated in the morning. A set of pads, it may be added, is expected to wear out two sets of shoes. The trial of the invention, we believe, has fully borne out the statements of the inventor as to the merits of the apparatus.—*Medical Press*.

Foreign Correspondence.

CHIHUAHUA, MEXICO, November 17, 1883.

TO THE CHICAGO MEDICAL JOURNAL AND EXAMINER :

This city of 20,000 souls, the capital of one of the Montezuman States, of unknown age, is situated among the "everlasting hills," that richly abound in ores of copper, gold, and silver; and, notwithstanding the encroachments of a higher civilization and more elegant designs in architecture, still preserves, intact, all the elements and characteristics of the typical Aztec *ciudad* of a hundred years ago, including the omnipresent one-story quadrangular adobe building, enclosing a green or paved plaza, which, among the wealthier, is often cooled by the fountain's spray, shaded by semi-tropical foliage, and perfumed by the breath of many flowers. There the family lives, shut out from the world by the immense carved wooden door overhanging the edge of the paved street, and by the iron grating of the windows seen everywhere, which give to the stranger, at first sight, the impression of being in the midst of a vast prison.

Many Americans are now coming in—many adventurers and many in search of health. The Mexican Central Railroad is now completed over 200 miles below here, and by April 1st, 1884, the gentlemanly officers inform me, it will be completed to the City of Mexico, a distance of 1,250 miles from Paso Del Norte. And as the climate in these parts, together with the scenery, affords the strongest allurements to those in quest of health, rest, and pleasure, it is not going too far to say that the cleanliness, smoothness, and dustlessness of this road, combined with elegant

and marvellously clean stations and general offices, rob railway travel of its terrors. The cars are light and comfortable, and and move so smoothly that riding on the fastest trains is not irksome. The road in all its appointments is unique, and the civilizing influences of the North will surely but slowly follow it to its terminus. Here, at an elevation of about 4,000 feet, are not found extremes of temperature, nor "squalls" of weather. The thermometer will register from 30° to 108° F., with a mean annual temperature of 65°, and when the days are warmest the nights are always cool. Many at this season go lightly clad—barefooted; and to-day a six-year-old boy, by a neighboring brook where his mother was washing clothes with the soap weed, played joyfully in a state of perfect nudity. The atmosphere is dry and exceedingly light and exhilarating, and the appetite of everybody is good and readily satiated with fried quail, deer, antelope, etc., at the rate of \$18 per week, *al casa Americana*. There is not the least doubt that the words of an old U. S. Army surgeon, of ten years residence in the country, are true: "When this country is better known, it will be the grandest resort on the American continent for invalids, as dyspeptic, consumptive, and neurasthemic patients and over-worked professional and business men, who can here, in a very short time, regain their health and recuperate their wasted energies." Here, on the plateaus, the epidemics of childhood, of the temperate regions, do not occur so frequently, nor are they so difficult of management, being less malignant. Diphtheria and scarlatina are rare. Isolated cases of small-pox occur frequently throughout Northern Mexico, yet the disease has been epidemic but once (6 years ago) in years. Vaccination is compulsory, and the Mexican Central road has now a physician vaccinating all the employes of the road, though no small-pox exists along the line. Yellow fever, so fatal on all the coasts, is unknown here, and the occurrence of true typhoid fever is rare, and when found is usually in an American subject. Tape-worm is very common here and about Paso Del Norte, 225 miles north, and the cause is variously accounted for by competent medical observers. One of these, during the past two years, removed 17 worms, tinea soleum, from as many patients, "every one of whom was fond of

and freely ate, rare-cooked native beef." Another assigned the cause to the frequent use of mutton, while a third one observed that the worm occurs most frequently among the peons and the poorer classes, who are in the habit of eating great numbers of rabbits. All may be right; but as rabbits are known to contain great numbers of cysticerci, there is no doubt that they are pre-eminently the cause of trouble in this country. The usual remedy is male fern and pumpkin seed. Of course, Mexico has been celebrated for the frequency of the venereal diseases, and, if one may judge by the pink scleroticas seen on every hand, and by the declaration of resident physicians that "Every other man you meet carries his own sound or catheter," she certainly deserves and maintains her unenviable notoriety.

"Stone in the bladder," said Dr. Frank Paschal, of this city, after eight years experience, "is quite common." The doctor is a very celebrated surgeon and lithotomist, and is justly entitled to his reputation, as he has operated for stone (mostly by the lateral, but sometimes by the median incision) seventeen times on patients, from 3 to 3½ years of age and up to 70 odd years, with but two fatal results, and these died from exhaustion, the operation having been too long delayed. Dr. Paschal informs me that the average Mexican will stand a capital surgical operation to which an American would quickly succumb, with little or no shock, and that, in so much, is the field of surgery widened here. In midwifery, the frequent use of the forceps is demanded, and yet uterine lacerations and displacements are not very frequent. Ovarian disease is rare throughout Mexico. Only sixteen ovariectomies have been performed in the county, and only two of them outside of the capital, and nearly every one proved fatal. Uterine cancer is exceedingly common, and its frequency is often charged up to the effect of a slight cervical laceration occurring in a syphilitic constitution. The University of Mexico dispenses the sciences of the capital in Spanish and French, and there are published in the whole country but three medical periodicals.

And now, lest something may have been said, unintentionally, whereby some young professional reader might be induced to seek a location and a national reputation like our most worthy

and esteemed countryman, Dr. Paschal, it may be well enough to consider other things besides the following: And, 1st—The average Mexican has neither forgiven nor forgotten America's mean acts of 1843-7. His ways and thoughts are not your ways and thoughts. He is naturally suspicious, and though he may envy *los Americanos*, he is jealous of them and their inroads upon Mexican traditions, customs, and superstitions. "It takes two days to distribute one day's mail" in Los Coreos. Drugs are mostly imported and are enormously dear, being subjected to national, State, county, and municipal duties—the national duty alone increasing the cost 100 per cent. (nearly) over American prices. But now, if you will come, proceed thus: Send your diploma to the United States (American) Secretary of State, asking him to endorse it as genuine; then to your nearest Mexican Consul, who will likewise sign and send it to the Governor of the State you intend visiting, who, having examined, approved, and endorsed it, will send it for like action to the President of this Republic who may return it to you. You will now present yourself for examination, and not only prove a knowledge of *spoken* Spanish, but also a knowledge of the Mexican's everyday names of drugs, as well as their chemical and botanical names. The Board may examine in any or all the branches of medical science. Having been approved, you will then find some elegant senors, senoras, and señoritas, and take up your abode among a unique people, but in a magnificent country, full of grand scenery and grand possibilities, where invigorating climate will come to your rescue, enabling you to realize the effect on over-worked, broken-down constitutions of Dame Nature's magic restorative powers; for, after all, we must admit *en su poder nosotros podemos ganar la victoria*.

DR. DAVID W. YANDELL was recently elected an honorary member of the London Medical Society. We heartily congratulate the London Medical Society on its ability to secure so honored a name for its roster.

Domestic Correspondence.

BOSTON LETTER.

BOSTON, December 20, 1883.

This city is amply supplied with hospitals and dispensaries, and it may not be amiss to give you an idea of the Boston Dispensary and its new building, it being one of the oldest in the country, having been organized in 1796. The apothecary of the Dispensary was directed "to procure a board to be placed at the front of his shop, with the words 'Boston Dispensary' painted thereon, with such other device as may be congenial to the institution, and corresponding with his ideas and fancy." He selected that of "The Good Samaritan," and since that time this symbol has been used. In a report of the institution for 1858 is found the following: "Tradition says that the artist, in his anxiety to illustrate the full import of the scene described in Luke x. 32, painted the Levite in the act of passing him by on the other side" When the work was finished, the managers detected in the Levite so striking a likeness to a certain clergyman of the town, that the figure was effaced.

The support of the institution is from the interest on its funds and annual subscriptions. Until within a few years all medicines were dispensed free of charge. With some misgivings the managers ordered a fee of 10 cents to be charged on all medicines dispensed, of course leaving it open to the physicians to remit this fee in cases of absolute want. The result has been watched with interest, and instead of a yearly deficit, a third source of income has been added. The original intent of the institution was to care for the sick at their own homes, and from 13,000 to

14,000 persons are annually provided for in this manner; but an average of 84 patients are treated each day at the "Central Office," in the various special departments, and this now offers a large field of observation, which is being utilized in clinical instruction by the "visiting staff." The work of the "Central Office" was temporarily removed to Washington street, while the new building was erected on the site of the old building, at the corner of Ash and South Bennet streets. The building is very nearly square, the dimensions being 65 feet 8 inches by 65 feet 4 inches, with an entrance porch on Ash street. The walls are brick, with sandstone trimmings, and with the unique arrangement of the chimneys, the gable corners, and slate-hipped roof, we have an effective design. The building contains a basement, first and second stories, and a commodious attic. The basement contains the furnaces, a separate boiler for supplying hot water to the various parts of the building, the coal bins, and a completely fitted laboratory for the compounding of pharmaceutical preparations. The first story has a hall 22 feet wide, which runs the entire length of the building, and is used as the waiting-room for patients, on one side of which are the dispensary proper, trustees' room, laboratories, and a consulting room, and on the other side is divided into five consulting rooms for the physicians in attendance. The second story contains a hall of similar dimensions to the one below, with an ample and attractive staircase leading thereto. On one side there is a large, unfinished apartment, an operating and lecture room; on the other side, five consulting rooms for the physicians. The attic contains the janitor's apartments. The finish throughout is of ash, with floors of the best Southern pine. Soapstone sinks and hot and cold water are placed in every room. The building, in point of construction, is really second to none in Boston. Ash settees for patients, and a reproduction of the old Plymouth chair for the physicians, make the furnishings comfortable and ornamental.

The friends of the medical education of women have again made an effort in their behalf. When the "Medical School" moved into its new building, an appeal was made to "the faculty" to allow the old building to be used for a school for the medical education of women, a sort of "annex" to the present "med-

ical school." "The faculty," however, declined, considering that the movement would not have a sufficiently strong financial backing. The Dental Department of Harvard University now occupies the old building.

Kairine, the new antipyretic, has been used at the City Hospital by several gentlemen. The drug reduces the temperature certainly and rapidly, but in two cases produced alarming symptoms of depression.

The various medical societies are fully engaged in their winter's work, and a medical man's evenings might be almost constantly occupied in attending the various meetings. The division of the "county society" into sections is working very advantageously, and some good work is the result. B.

TREATMENT OF DENTAL CARIES WITH SOLIDIFIED CREOSOTE.

Creosote is a popular remedy used for the pains caused by caries of the teeth. As its excessive fluidity frequently occasions bad accidents in the mouth of the persons that use it, it can be solidified by the addition of a certain quantity of collodion, 10 grams to 13 grams of creosote. This mixture is more manageable than the simple creosote, and forms a varnish which closes the orifice of the tooth and prevents the air from influencing the dental nerve.—*Revue de Thérapeutique*.

CHLORIDE OF GOLD.

Mr. Martineau prescribes the following solution, in doses of two to three teaspoonfuls for the most obstinate cases of syphilis and tertiary ulcerations:

Chloride of gold 1 gram.

Chloride of sodium 1 gram.

Distil. water 1 litre.

He reminds us that the chloride of gold and of sodium have been lauded for the sharp pains of ataxia, and that Bazin recommended them in scrofula.—*Le Praticien*.

Editorial.

ON SANITARY SPELLING SCHOOLS, WITH SOME INCIDENTAL REMARKS CONCERNING DIRTY LINEN.

The report of the proceedings of the Illinois State Board of Health at its quarterly meeting, October 18-19, 1883, affords an interesting illustration of the difficulties which beset such a body in its efforts to accomplish by forms of law what cannot be properly reached by law.

A considerable portion of the report is occupied by an opinion furnished by the Attorney General of the State, in reply to certain questions raised by the Board concerning prosecutions for a violation of the law of 1877. This official states that this law "can only be maintained under the theory that it is a proper exercise of the police power of the State;" otherwise it "would be an unwarrantable interference with private rights." This "proper exercise of the police power" he further assumes to be "the preservation of the public health from the experiments of quacks and unqualified persons."

As we have shown in a late issue, Mr. Huxley has abundantly proved the folly of any such effort for the preservation of the public health. Mr. Herbert Spencer has also presented the philosophical grounds of such failure, showing that it is inevitable from the very nature of things. Observation of the course of events in our own State during the past six years, brings to light a great amount of evidence that government intervention for the protection of people against quacks simply defeats itself. The impostor merely changes his garb, and pursues his old game without hindrance. He takes pains to arm himself with the proper

credentials, signed and sealed by the Board of Health, and to these he can always refer the public as evidence of orthodoxy and competence. In this way hundreds of ignorant and unworthy fellows have been presented to the public as worthy of confidence. The regular physician, who has patiently qualified himself by study and experience, is no better before the law than any unscrupulous humbug who is "recognized" by the Board of Health. Only a few of the stupider sort of quacks run any risk of molestation. An occasional prosecution of these is attempted, creating thus an impression that the Board of Health is doing something to purge the profession, but the practical outcome of such activity has no terrors for the great army of quacks who pursue their game under the protection of the law. This is inevitable, and therefore cannot be a matter for regret. It should, however, be sufficient to open the eyes of those who still believe in the ancient superstition that legislation is the all efficient remedy for the ills of life. As Mr. Huxley has well said, it is much better for people to form the habit of taking care of themselves, than for the State to disarm their suspicions by professing to protect them against quackery. The quack merely learns to keep within the letter of the law, and finds his position established by the endorsement of the State, upon a level of respectability which gives him an advantage against the citizen which he could have obtained in no other way. Our law, therefore, becomes a law, not for the protection of citizens against quackery, but, on the contrary, a law for the protection of quacks against the natural suspicion of cautious citizens. According to the Attorney General of the State, therefore, this law is an "unwarrantable interference with private rights," since its *raison d'être* has no existence.

Another evidence of the injustice of our present law is furnished by the manner in which it requires the Board of Health to deal with offenders against its provisions. If we are rightly informed, the mode of action is briefly this: The Secretary of the Board of Health decides to make a descent upon some particular offender. He employs detectives to "put up a job" upon the rogue, who generally falls an easy victim to this method of attack. The Secretary examines the evidence thus obtained, and if it seems sufficient, he reports to the full Board at its next meet-

ing, that such or such a physician has given cause for revocation of his license. The Board must as far as possible finish its business in its hours of session. Its non-professional members may be supposed to know nothing, and to care less, about such things. The medical members of the Board are governed by the "courtesy of the court," or by a sense of satisfaction at the thought of making an example of somebody. As a matter of fact, the whole thing is finally left to the Secretary, and whatever he may recommend is tolerably sure to be sanctioned. The criminal then finds himself without any standing in court if he undertakes to continue his practice, because he is then prosecuted, not for unprofessional conduct, but for practicing without a license, so that the justice of his first condemnation cannot be made a question for legal investigation.

Now, the satisfaction with which every right-minded physician contemplates the summary overthrow of an impostor and a charlatan, should not blind him to the enormous injustice of the proceeding just outlined. We hope that there is some mistake in the case, and that the Board of Health may be able to take a position different from that in which it seems to be now placed by the law in its present form. If such be the real mode of dealing with offenders, justice can be obtained from the Board only at its pleasure, for such justice must be secured from a court where the offices of detective, prosecutor, judge and jury are all united in one person. It may be proper to have a public detective set over the medical profession, but he should not be allowed also to act as judge and executioner. All offenders against whom evidence may be secured should be presented by the Board of Health to an independent court of law for adjudication of their offenses. Otherwise, where can be the security that the office of Secretary shall not be employed as a means of injustice and oppression? The ecclesiastical courts which existed in England during the Middle Ages, form the only parallel, concerning which we have any knowledge, to the tribunal of our Board of Health. Organized by the best of men for the most noble and beneficent purposes, those courts became the agents of one of the worst forms of arbitrary tyranny the world had ever known. Such

will be the inevitable result if our own Board of Health should be suffered by our apathy to evolve its natural conclusions.

A similar objection lies against many of the measures proposed by the Board of Health in the matter of medical education. The best teachers of medicine will not yield to others in a desire for the progressive elevation of the standard of medical education. But there must be evidence that the line of action marked out by legislation is judicious and likely to be successful, before there can be a cheerful acceptance of everything that is forced upon the medical colleges, with or without their consent. It is very evident that there are two sides to this whole question of medical education. The experience of our English brethren shows how difficult and delicate is the proper adjustment of the matter. One would, therefore, suppose that before initiating any new departure in this State, our Board of Health would at least have consulted with the members of the medical corporations most likely to be affected by their action. In Great Britain, when any legislation affecting medical education or the interests of the medical profession, is undertaken, the whole matter is first subjected to the most searching inquiry by the representative members of the bodies interested. It is ardently debated by all the medical journals throughout the Kingdom; the "fierce light of parliamentary discussion" is poured like a flood upon it; every effort is made to secure the rights and privileges of all parties concerned. But in this State nothing of the kind is attempted. A little knot of irresponsible gentlemen, some of them physicians and some of them not—all with little or no experience in teaching scientific medicine—lay their heads privately together, and, without asking advice, or even an expression of opinion from any one, they proceed to dictate to the medical colleges in matters affecting some of their most vital interests. In this way they have seized upon a vantage ground whence they can inflict irreparable injury upon any institution which may fall under the ban of their displeasure. Their reports are garnished with the names of colleges which are "not recognized by the Board"—names which are paraded with evident gusto, very much as an Indian brave points to the scalp locks dangling at his belt; and we all admire and applaud the good work of "purging the profession."

But a little investigation reveals the fact that this action is entirely arbitrary, and that no medical college, however venerable or excellent its record, is safe against any assault which the Board of Health may choose to bring against it. Of course it is very easy to insist that there is no danger of any harsh or unjust treatment from the Board, but this does not remove the fact that there exists no legal barrier between the Board and any medical college whatsoever. A most conspicuous example of the consequences of this fact is exhibited by the indifference of the Board to all conference with the medical colleges of the State in the matter of medical education.

An excellent illustration of the unwarrantable character of certain of the exactions made by the Board of Health is contained in the admission by the Secretary concerning their effects upon medical colleges which have adopted a three years graded course. The only way out of the difficulty, which the Secretary would propose in a case which actually presented itself, consisted in a virtual evasion of the rules adopted by the Board. As a matter of fact, if the Board should attempt to enforce their own rules it would soon result in the practical crippling of any school within the State which might adopt the three years' graded course. How can this be reconciled with a judicious zeal for the elevation of the standard of medical education?

Again, in the matter of preliminary qualifications for admission to the medical colleges of the State, it is difficult to see how the action of the Board is likely to accomplish any good result. There is no unanimity of opinion regarding the value of such preliminary examinations as are required. We have already, in our last issue, quoted the opinion of Prof. Huxley; and the utterances of such a man as Prof. Knapp (see his recent inaugural address, published in the *Medical Record*) are of the highest importance in this connection. The whole matter is complicated by so many conflicting interests, growing out of the independence of State governments, rendering impossible any concerted action throughout the Union, that our State Board should undertake nothing without the fullest consultation and most cordial coöperation with all the colleges in the State. On the contrary, the Board, by its arbitrary action, is simply hindering the natural and healthy de-

velopment of the medical colleges, and, under the plea of raising the standard of education, is only driving timid students out of the State, into inferior schools, where they cannot secure anything like a metropolitan education. The fledgling medical colleges upon the frontier can well afford to pay our Board liberally for this kind of discrimination in their favor.

The insignificance of the matters which chiefly occupy the Board is further shown by the prominence given to the subject of spelling. Nearly three pages of this brief report are filled with samples of letters received from would-be medical students and frontier physicians. Previous reports have been filled with similar specimens. We would suggest that this subject has now been sufficiently treated by the Board, unless they wish to be considered a spelling school. Of course, there can be no harm in exhibiting such letters to the different members in private sessions of the Board. College Faculties have been known to amuse themselves for a few moments with similar effusions from a newly plucked candidate; but that is something very different from the parade of such errors before an unprofessional public. The Board should remember that their correspondence is chiefly with the riff-raff of the medical profession, and with such young students as do not know any better way of obtaining information. It is, therefore, to be expected that their correspondence will be unusually fertile in examples of bad spelling and feeble grammar. Every one who is acquainted with the young men who compose the classes in our respectable medical schools, knows that such errors are exceedingly rare among them at the present time, whatever may have been true when the medical members of the Illinois State Board of Health were students. It is, therefore, a very injudicious thing to make so much of a little matter as has been done in this and in preceding reports. They are widely circulated, and are copied into the newspapers, giving to the general public the impression that physicians and medical students are, as a rule, exceedingly illiterate. For example, a late number of the *London Medical Press and Circular* made a quotation in its columns from the reports of the Illinois Board on the subject of spelling; and if, as a result of the publicity thus acquired, a large proportion of the practitioners in Great Britain do not conclude that

most American physicians do not know how to spell, they will certainly exhibit more judgment than they have usually done in forming opinions as to this country and its inhabitants.

In this way public opinion is led very far astray, and the medical profession suffers correspondingly in the popular estimation. Dirty linen should be quietly washed at home, instead of being flaunted in the face of every passer-by. "It is an ill bird that fouls its own nest," is an old saw that should not be allowed to sink into oblivion.

We remark, in conclusion, that the periodical reports of the Board produce the impression that very little work of a strictly sanitary character is occupying its time. Mousing after irregular practitioners, "steering" medical students, nursing their pet medical colleges, and stuffing the newspaper reporters with Falstaffian narratives of their combats with the quacks—these seem to be the favorite pursuits which arouse the enthusiasm of the authors of these reports. The question of the particular value of such work to the general public must inevitably at length arise for discussion. The consequences of such discussion will not be averted by anything short of a reformation of our present State law.

CANADIAN MEDICAL DEGREES IN ENGLAND.

In a late number of this journal, we called attention to the fact, that while Canadian physicians are able with insignificant restrictions to remove to this country and engage here in the practice of medicine, the Canadian laws regulating such practice in the dominion are such as to practically exclude physicians having American diplomas from similar privilege.

A striking illustration has just been furnished of the position sustained in Great Britain by the "royal" medical institutions of the Dominion.

It seems that a Dr. Chas. Empey, whom our English friends across the water introduce to the public as "Mr." Empey, having been educated in Canada, obtained a degree of M. D. from the Royal College of Physicians and Surgeons, in Kingston, Ontario. He removed to Yorkshire, England, and there became assistant

to one Dr. McNab of Crosshills, agreeing not to practice on his own account in that neighborhood. It soon, however, became convenient for the Canadian to cancel or in some way to evade this agreement, so as to begin the practice of medicine and surgery there on his own account.

A jealous Briton was not long in giving alarm to the neighborhood. In a letter to the *Skipton Pioneer*, signed "Veritas," (how often has this specious name been used as a cloak beneath which mortal stabs have been inflicted upon unsuspecting breasts!) it was pointed out that "Mr." Emphy's name "is not, and never was, upon the medical register; and that he had, therefore, no right to assume the title of Doctor nor to practise as a physician and surgeon." "Mr." Emphy then began criminal proceedings for libel against the unfortunate *Pioneer*, which resulted, after a prolonged argument before the bench, in the dismissal of the case against the alleged libeller.

In reviewing the points of this case, as they have attracted some attention in Great Britain. it is noticeable that the medical press for the most part take the ground, that "Mr." Emphy was simply an unfortunate man. They admit, as indeed they must in the face of the law, that no one can now become entitled to practice medicine in the United Kingdom who has not obtained the requisite degrees in that kingdom.

With the wisdom, the justice, or the necessity of such a law, we are not now concerned. Neither shall we take occasion at this time to express our sympathy with "Mr." Emphy, for the hardship which his experience as a practiser in Great Britain has brought to him. It is the "Royal" College of Physicians and Surgeons of Kingston, Canada, for which we mourn. Has it come to this, that that which the Canadians call "royal," is such for the Dominion only? Is the "royalty" in which our Canadian friends take such keen pride only, after all, a species of pseudo-royalty, which does not hold good in the presence of the genuine article on the other side of the Atlantic?

If this be so, perhaps it would be as well to change these titles so as to have them read "Royal for Canada Only."

"CRITICISING THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION."

Several of the smaller medical periodicals in this country have thought it proper to call attention in a public manner to the columns of the *Journal of the American Medical Association*, which have exhibited in the past a number of blunders, some trivial, some gross enough to make one blush for the knowledge which printers and proof-readers display of even the common words in our mother tongue. The *New York Medical Record* of December 22d, 1883, charitably declines to publish a letter from a Connecticut correspondent severely commenting on the same facts.

We should not have spoken upon this point if the editor himself had not thought fit to make a semi-humorous response to one of his critics. What we have to say may be set down in very few words. We have acutely suffered, as what editors have not, from errors apparently of the very grossest ignorance, for which we were not in any way responsible. The *Journal of the American Medical Association* is in a position to command the respectful consideration of every fair-minded member of the medical profession in this country. It has just completed the first year of issue, and if its young critics will take the pains to look over the first year of such a journal, for example, as the *London Lancet*, and amidst its typographical and grammatical errors, peruse the accounts which it contains of the movements of the British court, and the latest theatrical representations, we think he will look more leniently on the facts in the present case.

The *Journal of the American Medical Association* is not the property of its veteran editor. It belongs to the American Medical Association. It does not appertain to a large publishing house, nor to a medical school, nor to a wholesale drug manufacturing firm, nor to a man with an enemy to injure or a scheme to promote. It belongs to the profession of the country; and, being in this respect quite singular, we entertain for it a feeling of respect and admiration, which several dozen more typographical errors could not destroy. We call on every man in the country who would like to see the profession represented one day by a thoroughly independent publication of its own,

fearless of every crusted abuse and incorruptible by the wealth of any corporation, to support this journal by financial and moral aid. It is in its first and weakest stage. It is as sure to become in the future what its best friends desire it should be, as the members of the profession it represents are sure to advance in the cultivation of science.

We beg its critics to wait; and we beg also its patient editor to refrain from answering them. We look to see its columns present each day more of a national and less of a local character; and we hope to see it before long repeating the utterances of the very best men in every part of the country.

The Universal Bibliographic Review of the Medical Sciences, with an annual alphabetical index indicating the articles contained in special journals, and the works published in every language and in every country, methodically classified according to the subjects discussed, followed by an alphabetical list of authors, is announced as a monthly publication about to appear under the management of Dr. Ote. Meyners D'Estray.

The object of this review is to enable the practitioner and the author to turn at once to the sources which they desire to consult upon any subject whatever.

The *Bibliographic Review* will form every year a handsome octavo volume of at least 600 pages. The price of subscription is 30 francs annually. In order to subscribe, address M. B. Grémiaux, General Secretary, Place Saint-Michel, 6, Paris.

NUMBER OF BIRTHS IN FRANCE.

During last year there were 970,843 births, of which 961,203 were simple, that is, there was birth of a single child; 9,333 were twins, and 107 were triplets. Among the simple births, 829,440 were born alive, and 40,763 were dead born. Of multiple births, 205 infants were born alive, 116 dead. Therefore, it can be seen that the twin births gave about three times more dead born than the simple births, and that among the multiple births the proportion is nine times greater.—(*Le Praticien*.)

Reviews.

THE PATHOLOGY, DIAGNOSIS, AND TREATMENT OF DISEASES OF WOMEN. By GRAILY HEWITT, M.D. London, F.R.C.P., etc., etc. Edited with Notes and Additions by Harry Marion Sims, M.D., New York. A New American from the Fourth Revised and Enlarged London Edition. With 236 Illustrations. Bermingham & Co., New York: 1883. Two Vols., each \$2.25.

Dr. Hewitt needs no introduction to American readers. His work on the Diseases of Women has been conspicuously before the medical public for twenty years. Its first edition appeared in October, 1863. It has been enlarged with each reissue, till its present appearance is in two volumes of over 500 pages each. Every gynæcologic subject is treated in Dr. Hewitt's charming and forceful manner. To ripe scholarship, he has added an extensive and varied experience, and it is this happy combination that makes Professor Hewitt an authority in gynæcology. The chapters on Cancer; the Hystero-Neuroses; the Abnormalities of Menstruation, and the Diseases of the Ovaries, are especially interesting and instructive. Fourteen years ago, the writer heard Professor Hewitt lecture on uterine flexions and displacements, and saw him adjust many pessaries, and was greatly impressed with the extreme readiness with which he selected and adjusted the latter. Upon this branch of the subject we may turn to the fullest chapters in the work, with the assurance of reading the most complete exposition of it in any language. Professor Hewitt is the especial advocate of the mechanical cause of uterine disorders. This belief is defended and advocated most elaborately.

The work is well issued, and will be an advantage and an ornament to any library.

? QUIZ COMPENDS ? No. 6. A Compend on *Materia Medica and Therapeutics*, With Especial Reference to the Physiological Action of Drugs. For the Use of Medical, Dental and Pharmaceutical Students. Based on the Sixth Decennial Revision of the U. S. Pharmacopœia, and Including many Unofficial Remedies. By SAMUEL O. POTTER, M.A., M.D., Acting Assistant Surgeon U. S. Army. Philadelphia: P. Blakiston, Son & Co. 1883. Pp. 141.

A most excellent work for students. Preceptors cannot put into the hands of their students any book that will so well drill them in the subjects of *materia medica* and therapeutics, as will this small volume. Brevity of statement is one of its principal features. At the same time, the essentials of the subjects have been kept in view. Each drug is methodically handled. First, its *materia medica* is given; then its official preparations. Afterwards follow its physiological action and therapeutics. Altogether, it is the completest "quiz compend" extant.

SEPULTURE: Its History, Methods and Sanitary Requisites. By STEPHEN WICKES, A.M., M.D., Author of "History of Medicine and Medical Men of New Jersey," etc. Philadelphia: P. Blakiston, Son & Co. 1884. Pp. 156.

Its table of contents enumerates the following subjects: History of Sepulture; Ancient Customs and Methods; Sepulchres; Interments Among the Greeks; Customs Among the Romans; Persian Burial; North American Indian Burial; Early Christian Burial; Animal Putrescence; Malignant Disease from One Corpse; Saturated Soil of a Graveyard Disturbed; Intramural Interment in the United States; Yellow Fever; Asiatic Cholera; Pestilence; Rural Cemeteries; Coffins for the Dead of Country Graveyards.

The author has evidently spent a vast deal of time in collating the facts that he incorporates in this volume. It is one of the outgrowths of the agitation of the subject of cremation, and is assuredly a most interesting and instructive work.

Original Translations.

ON THE TREATMENT OF EMPHYSEMA IN INFANCY.—BY DR. L. FURST, OF THE UNIVERSITY OF LEIPSI, TRANSLATED FROM THE GERMAN, BY EDWARD SYDNEY MCKEE, M.D., CINCINNATI, OHIO, FROM GERHARDT'S HANDBUCH DER KINDER-KRANKHEITEN.

The pneumatic method may be described as altogether the most efficient in the treatment of the emphysema of adults of a grade not too far advanced. For reasons, however, which are to be sought in the difficulty with which are executed certain technical details, it may be said to be as yet far less efficient in the treatment of the same disease in children.

The difficulty, however, to which reference is made, is soon seen to be by no means formidable. Many of the obstacles it involves have already been surmounted; all promise to be soon levelled. When the technical details of the pneumatic method are more widely known and the results it can accomplish more generally recognized, it is safe to say that the time will arrive when as soon as an emphysema of the lung of a child is recognized, it can be relieved.

This strong assertion seems to be at variance with the view expressed by Vogel, that no diagnosis and therefore no therapy is possible in such cases. Certain it is that Vogel's view is not to be entertained in cases of simple alveolar ectasia without great tissue change.

Complete and true emphysema can not be forced to recovery, but here may yet be attained, through a judicious pneumatic treatment, a mitigation of symptoms and a lengthening of life—and such emphysema occurs seldom in children.

The difficulty of treatment in children lies in this, that in fact the process is not recognized as early as is necessary for restoration of the elasticity of the lungs. So that the more severe the primary trouble and the consequent injury to the organism of the lung thus rendered little capable of resistance, the greater the barriers to the success of the therapy here described.

Finally the awkwardness of little children, their restlessness and resistance to all mechanical treatment to which they are not accustomed, as also the difficulty of bringing them to exact, regular, productive in- and ex-piration, antagonize not a little the success of the treatment. From this we can get a hint that we cannot too early work prophylactically, especially in diseases which are wont to run into alveolar ectasia; and that on the other hand when we can make out lung emphysema, we dare lose no time in doing something for its relief. First for consideration is the indication to treat the primary trouble energetically, and above all with circumspection, to remove all hindrances to breathing, to remove catarrhal secretions and allay irritating coughs. These, it is well known, favor the origin of alveolar ectasia. But if such have already appeared, the indications are to direct treatment toward the disturbed relation between the inspiration, expiration and the lung capacity, and this alone on the plan of the pneumatic method. The numerous expectorant and emetic medicines hitherto employed for this purpose have never been followed by radical results, and only resulted in loss of time, while conditions, such as atelectasia, bronchial catarrh, etc., could have been in the same time improved by the pneumatic plan of treatment, and other cases complicated by difficulty of inspiration (croup, bronchitis capillaris, etc.) are remarkably improved to a great extent. In many cases a symptomatic treatment seems to suffice. In atelectasia from rapid unfolding of the embarrassed lung, in catarrh, in efforts to lessen secretion and to avoid the recurrence of laryngeal, tracheal and bronchial stenosis in croup, foreign bodies, etc., the fastest possible restoration of the passage of air in whooping cough and such spasms of coughing by the most careful management of the same, briefly, all primary troubles must react at the right time to favor the origin of alveolar ectasia. One must be on the lookout in pneumonia, in pleu-

ritis of complete retrogression, and in every case of disease of the respiratory organs, and remember that a permanent emphysematous condition occurs as well in the lung regions concerned, as in those neighboring, if one does not prevent in time a lessening of the active lung capacity, an insufficiency of the respiration, and an urgent dyspnœa. But one can obtain that only through medical and dietetic treatment of the primary disease and frequent control of the lungs. When one finds deformity of the thorax, he must induce its removal as without this kind of early orthopædic treatment, emphysema is scarcely avoidable.

If one is not able to satisfy the indications of the disease, then he does well to treat the symptoms which are those most generally found in emphysema, viz.: the catarrh and cough.

First in view are the inhalations of alkalies (bicarbonate of soda and common salt), by means of an apparatus with double rubber qulbs. Inhalations of salt or of turpentine (ol. terebinthinæ) are followed by good success if practised in large inhaling saloons, pine forests, elevations, or on the sea shore; also alkaline and saline muriatic mineral water. The use of expectorants (infs. ipecac, liq. ammon. anis) from time to time, is peculiarly favorable to other cases. Cold spirituous bathing and rubbing of the neck, breast and back are praiseworthy, partly to promote the expectoration through reflex irritation, partly to fortify against new colds. Clean, temperate air, free from dust and smoke; protection from raw, dry winds; the maintenance of a regular warmth of the chest by wearing flannels, assist the removal of the catarrh. The irritating cough, when it exists without copious secretions, is removed by inspiration of steam, by inhalation of the infs. hyosciami, belladonnæ, stramonii; less surely by smoking saltpeter papers. At other times it is displaced by internal remedies, such as narcotics, aqua lauro-cerasi, morphia, essence of belladonna, etc. The over-pressure of the expiration, and the ever threatening disposition to emphysema, are lessened through the mitigation of the cough, by damp, mild, not decidedly fluctuating temperature, exceptional climate, especially in winter time, accompanied by a strong, digestible diet. If whooping-cough is the principal trouble, the best prophylactic against secondary emphysema, espe-

cially for tender children, is a changeable climate, and, indeed, not too pleasant, but somewhat damp and exhilarating.

An effectual therapy against the alveolar ectasia, or, in fact, against the emphysema, can only be possible when the same is formed. If the atrophy of the lung tissue has not yet commenced in any considerable degree, but the entire process is limited to loss of elasticity, then, and only then, can we hope to bring it to direct retraction, the emphysema having been not long in existence. The only rational way in which this end can be attained at present, is the pneumatic treatment which was founded by Hauke, perfected by Waldenburgh, Schmitzler, Lange, von Liebig, Biedert, and others. These gentlemen, in this department, have done no small service to therapeutics.

The function surface of the lungs is lessened by the accompanying dilatation. This continued and repeated dilatation must by and by injure the elasticity of the parenchyma, and later cause it to atrophy or disturb the nourishment. Here occurs the difficulty that one can, through absolute extension of the muscles of respiration, bring the lungs to retract completely, and, by enlarging the space for residual air, accomplish a complete ventilation.

As the air and secretions stagnate in the bronchioles, they again increase the ectasia. In children, in general, the vital capacity of the lungs is not great, also the expiration and thorax contraction are insufficient. Therefore they appear sunken and in need of treatment, which should be on the plan of Wintereich (compare Vol. I, p. 132, this work). The pneumatometer of Waldenburgh* shows little value when the children are old enough to make regular inspirations. In the normal state, the pneumatic pressure power is relatively high, perhaps for the greater movability and the greater elasticity of the thorax. On this account, according to Waldenburgh, it has less value than in grown persons.

The increased but not satisfied desire for air leads to dysnoea and after some time associates itself as a sequela. Sometimes occurs another deformity of the thorax, contracting thorax; further all the above named sequelæ on account of the practical sinking

* Original manufacturers Fülz & Flor, Berlin Unter den Linden, No. 14.

in or the partial bulging out. The pneumatic treatment accomplishes a direct improvement of all the appearances mentioned, now by rarefaction, now by compression of the air breathed. It applies to :

I. Compressed air to remove the insufficiency of inspiration, which is accomplished through an increase of the negative inspirations, pressure as well as the drawing in of a greater quantity of air.

II. Rarefied air sets aside the insufficiency of expiration and increases the pressure of expiration, so that a greater quantity of air is exhaled.

Both of the acts of breathing are assisted by regular changing and exact regulation of the pressure. These ends pneumatic cabinets on the one side, and pneumatic transportable apparatus on the other, have attempted to accomplish, but with very different success. The pneumatic cabinets, such as are found at Reichenhall, Nice, Ems, etc., are, indeed, baths in compressed air, into which the negative inspiratory air arises; and thereby more air is conducted into the lungs. Dilatation, of course, is favored as the patient experiences the wearisome expiration. To lighten this and raise the positive expiration pressure, this must be made into relatively thinner or absolutely thinned air. This innovation, at least through exhalation into atmospheric air, has already been introduced. This works in a doubtful manner, as Waldenburg has shown, on account of the great difference of pressure which is not capable of being regulated. Instead of this intensive and rapid diminution of pressure one can on this account recommend only a gradual ascending pressure to promote the reaction of the lungs to which Kirauthe rightly gives the preference. Especially is this the case in the tender constitutions of children. These one should have exactly fixed in a pneumatic cabinet, and only then in behalf of the restitution of alveolar ectasia allow breathing. But in this sitting should be noticed not only the inhalation of compressed air, but also the grade of the rarefaction of the atmosphere in which the expiration takes place. In other cases one should aim at the widening of the lungs with deep satisfying inspirations. The cure of chronic lung emphysema, however, is difficult. The pneumatic cabinets, if they

are not made correctly and do not attain technical completeness, the exact regulation of the expiration pressure, resemble the transportable apparatus.

The transportable apparatus answered formerly in the high grade, because they made more promptly and more surely the exact regulation of the in- and ex-piration. Failure may be caused by the escape of a part of the air through the apparatus. The improved apparatus of Waldenburg¹, Schnitzler's modification of the same², Weil³, and Biedert⁴ are at present the only ones which can be thought of in reference to practicable usefulness, transportability and for rarefaction and compression of the atmosphere. All mention of anything similar to these are found in Knauth's writings, or in Waldenburg and Biedert's works. In this work only so many are mentioned as are able to maintain a reliable, constant, thickness of the air for every phase of the respiration, and thus enable one exactly to decide in an individual case, when in a fitting manner to increase the disturbance of breathing. How far the alveolar ectasia of children extends to the grown is not a fixed fact. There is not yet a sufficient collection of data. According to Knauth, the expiration into thinned air offers what fails in emphysema, since it is the "specific mechanical antidote" of Waldenburg, the proper remedy of Biedert. One in the future can only aim at the making of this important therapeutical aid available, not only with large intelligent, but also with little children. This is to be done through the greatest technical completeness possible.

Hanke, the meritorious originator of Pneumo-Therapy, calls attention to the fact, that the elasticity of a child's thorax furnishes a favorable condition, the narrowness of a child's air-passages an urgent indication. The cure of the difficulty by the self-regulating apparatus, brought to notice by him, has not been verified. The remedies discovered by Hanke have accomplished just as little at this stage of the experience. These are the pneumatic coat of mail (Wiener Med. Presse, 1874, No. 34 und

¹Berlin, Windler, Dorotheen Str. 3.

²Vienna, of J. W. Hauck, Wieden, Kettenbrücke Gasse 20.

³Berlin, of Menter, Friedrich Str. 99.

⁴G. H. Jochem in Worins on the Rhein.

36) and the pneumatic tube¹ (Stricker's Jahrb. d. Med., Wien, 1877, I. vol., also Knauthe, l. c.) They are worthy of frequent trial, however, especially with small children.

These arrangements are very ingeniously contrived, the principal thing being without further assistance from the child to suitably regulate the pressure of air both without and within the lungs. They cover the body as well as the chest with a coat of iron. Within this, one can, at will, rarefy and compress the air so that in the one case the intra-pulmonic, in the other the extra-thoracic pressure predominates. One must acknowledge that such an arrangement, in case it proves practicable, may be made useful for little children, as the sittings cannot be rendered difficult by restlessness. It is only to be regretted that till now a regular alteration of the in- and ex-piration is not possible. One is, therefore, compelled for the present to continue both acts in rarefied atmosphere, then again draw a number of breaths of compressed air. Though in both cases disadvantages present themselves, they have some attainable uses. Strengthening of the ectasia, difficult expiration, dyspnœa, apnœa, disturbance of the circulation can occur in tender, young children, as Hauke himself has granted. The consolation subjoined by him, "that the child attains the satisfied feeling of a complete respiration only when it breathes constantly a succession of ascending respirations to the full dilatation of his lungs," has only limited power for good in some cases. These are atelectasia, laryngo- and broncho-stenosis through croup and rachitic thorax. So long as one cannot make the above mentioned indications satisfactory for the in- and ex-piration, such an apparatus does not work with success. It can only assist in lightening the inspiration, dyspnœa, and promoting the filling up of the lungs with oxygenated air. The above described transportable apparatus is used with good success with large children if the mouth pieces and masks fit exactly.

The cautions are:—

I. The sittings are not to be continued too long, nor to occur too often.

¹Manufactured by Richard Mauch, Vienna, III., Apostel Gasse 14.

II. The difference in pressure dare be only gradually and cautiously increased and diminished.

III. The rarefied air is a powerful stimulant for the lungs. On this account are the acute inflammatory processes to be excluded from the pneumatic treatment.

The last point also forms a weighty indication against the pneumatic treatment in the related cases.

The curative action of the rational and thoroughly carried out pneumatic treatment is self-evident and lasting.

The inhalation of compressed air distends airless lungs and sunken thorax, increases the vital capacity and quiets the hunger for air. On this account, a richer supply of oxygen is made possible, a more thorough cleaning out of the carbonic acid gas, and a more decided exchange of gases. On the contrary, the exhalations into rarefied atmosphere cause quite an observable diminution of the lung volume, for the duration, even with stronger dilatation. The elasticity of the lungs and thorax can be compensated; even the beginning disturbance of nutrition, for instance by capillary compression. The expectorations are lessened, and those severe symptoms of asthma and bronchitis stopped by the easing of the expirations. The exchange of gases in the expiration into rarefied atmosphere is more complete as the ventilation of the lungs becomes better, and the pent-up residual air is thrown out. Here are cited as further favorable results in pneumatic therapeutics and beginning emphysema: Improvement of the tissue change; the anæmia; the deformity of the thorax; freedom of circulation; cure of the accompanying catarrh, and lessening of the disposition to the same.

Pneumatic therapy has many successes to show for those special afflictions or complications which belong to emphysema. These complications are partly improved or cured as soon as the primary disease gives way. They are, asphyxia; atelectasia, congenita et acquisita; thorax rachitis; insufflation; dyspnoea in croup (Hauke); bronchitis; asthma (Biermer); ectasia after whooping-cough, and bronchial catarrh (Lange, Waldenburgh von Liebig).

Here must yet be observed that Waldenburgh recommends in emphysema without bronchitis the asthma preponderating, the expiration into rarefied atmosphere; when bronchitis accom-

panies, inspirations of compressed air; in asthma the last during the attack, in the free intervals the usual in- and ex-pirations. Further, according to Langer, warm baths and cold douches assist very much the pneumatic treatment. The method of compression recommended by Gerhardt is suitable for many cases in which one can not arrange for a pneumatic apparatus. This satisfies the indications by mechanically narrowing the thoracic cavity, during the expiration, by enlarging the vital capacity and lightening the expectoration. One must carry out this compression of the elastic chest walls of children with caution and with careful consideration of cares and complications. Geyer recommends as a more constant substitute an elastic shirt. It is self-evident that this only increases the difficulty of inspiration.

The climatic treatment can only be directed against the complications and original affections. According to Biermann one shall, when he has bronchial catarrh, with dry, strong, cough and tenacious secretions, give the preference to low-lying, damp places for the time when the heat ranges 12 to 16 centigrade, especially so if there are sea coasts. It is not to be denied that the rarefied air of high elevations improves the ventilation of the lungs, lessens the insufficiency of the expiration and increases the contractility of the lung tissue. But the disadvantage of a high health resort for children more than for grown persons, lies in the permanence of the rarefaction of the surrounding air. In some cases severe consequences are sure to follow from the greater expansion of the gases of the blood oftener. The more tiresome and less deep the inspirations, which do not satisfy the hunger for oxygen, the more throwing out of water from the lungs, and the increase of the heart's action.

However tempting on first thought to advise a climatic cure for a child which has recovered from some severe disease, yet the correct choice of one which acts directly on the case is difficult.

It is understood from the first that one must in the treatment of emphysema combat the sequelæ as well as the constitutional troubles. These sequelæ are anæmia, intestinal troubles, chronic bronchial catarrh, asthma, and engorgement.

The therapeutics of emphysema of the cellular tissue, when interlobular, mediastinal or subpleural can not be discussed as it

is not clinically diagnosticable. As symptomatic treatment of subcutaneous emphysema are recommended, compress bandages, dry cupping and punctures with the triocar.

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PREGNANCY OF 56 YEARS.

Mr. Lapprey, making the autopsy of a woman 84 years of age, detected in the uterus a consistant tumor which was covered by a stony layer. The woman had noticed the tumor first when she was 28 years of age, and it had never made her any other trouble than by its weight and volume. The physicians being present at the autopsy were astonished to find in the interior of the cyst a well-developed fœtus, from six to seven months old. By putting the fœtus accidentally in some strong solution it was destroyed. (The author does not say if the fœtus cried lustily after being 56 years in the uterus.—Tr.)—*Lyon Médical*.

Selections.

ACUTE TONSILLITIS—EFFICACY OF THE COMPOUND GUAIAC GARGLE AND OF THE SALICYLATE OF SODIUM.

For therapeutic purposes, according to the teaching of Prof. J. Solis-Cohen, and as practiced in his clinics, cases of acute tonsillitis may be divided into two classes: 1st, simple inflammatory or local; 2d, rheumatic or constitutional.

Each of these classes might be extensively subdivided, according to the most prominent objective or subjective, anatomical or pathological manifestations. Such refinement in nomenclature (for this alone is it, practically) is, however, unnecessary in arriving at the therapeutic indications. For whether the tonsillitis be unilateral or bilateral, or the two glands be affected consecutively—whether the inflammation be superficial or deep-seated, circumscribed or diffuse, limited to the follicles, or involving all the component structures—whether the morbid process be confined to the tonsil, or extend more or less widely among neighboring tissues—any particular case having been properly assigned to one of the two groups mentioned, its treatment need not be materially changed.

Of course, should suppuration threaten or occur, or should the enlargement of the tonsils be such that respiration becomes seriously impeded, incision, scarification, or other appropriate surgical procedure may be required. But when the patient is seen early, say within the first twenty-four hours, such accidents are very unlikely; if, indeed, the tendency to grave manifestations, be not entirely averted. At all events, they did not arise in any of the cases treated at the Polyclinic.

The treatment has been as simple as it has been eminently successful; the principal reliance having been placed upon two remedial measures only, each of which seems entitled to be termed specifically appropriate for the particular group of cases in which it has been employed.

1. *Simple Inflammatory Tonsillitis*.—When the principal objective symptoms consist in alteration of voice, and more or less redness and enlargement of one tonsil, with or without swelling of the glands at the angle of the jaw; there being little constitutional disturbance; the pain complained of being chiefly due to tension; the odynphagia which is usually present having manifested itself after the swelling of the gland has been noticed; the disease may be considered as a local affection.

The treatment adopted in such instances is a modification of the old and well-tried guaiac treatment; and consists in the employment as a gargle of a mixture long known throughout the West and Southwest under the name of "diphtheria mixture" and similar titles. This is known to the House Pharmacopœia as the *Gargarysma Guaiaci Composita*. Two fluidrachms each, of the ammoniated tincture of guaiac and the compound tincture of cinchona, are mixed with six fluidrachms of clarified honey, and shaken together until the sides of the containing vessel are well greased. A solution, consisting of eighty grains of chlorate of potassium, in sufficient water to make four fluid-ounces, is then gradually added, the shaking being continued. If the apothecary is careful to make this preparation *secundum artem*, a not unpleasant mixture will be obtained. Without due care, however, the resin will be precipitated.

The patient is directed to gargle with this mixture freely and frequently, at intervals varying from every half-hour to every three hours. In some instances, a saline cathartic is first administered. Should any of the guaiac mixture be allowed, it is considered rather beneficial than otherwise, and its deglutition is sometimes recommended.

Relief is usually experienced within a few hours, and recovery is prompt. Patients often return only to report their cure.

A young colored man had been attacked about eight hours before presenting himself at the clinic. When the writer saw

him, there was great enlargement of the left tonsil, causing intense pain, and preventing deglutition of solids. The submaxillary gland and some of the cervical glands of the same side were so much swollen that he was compelled to bend his head down toward the right shoulder. This patient reported himself well sixteen hours after coming under treatment. In his case, one ounce of Rochelle salts was first administered, and the compound guaiac gargle was directed to be used every two hours; but the relief following the first application was so grateful, that, in order to secure freedom from pain, the patient resorted to his medicine every half-hour or so.

A little girl of seven years was brought to the clinic with unilateral folliculous tonsillitis, a few hours after she had begun to complain of pain in her throat, and was told to use the compound guaiac gargle at intervals of two hours. She did not return until a month later, June 16, when she was brought for treatment of an acute coryza. Her mother remarked: "That medicine for her throat worked like a charm. She got worse for a few hours, but was well next morning."

Several similar cases of prompt relief could be cited in addition.

2. *Rheumatic or Constitutional Tonsillitis*.—When the first manifestation of the disease (excluding prodromata of headache, malaise, etc., which may or may not be present) is intense pain upon deglutition, causing great accumulation of saliva from unwillingness to swallow the excessive secretion; examination of fauces revealing perhaps a slight congestion—perhaps nothing more; more or less febrile reaction soon ensuing; the case may be assigned to the second or rheumatic group.

In these cases the odynphagia cannot be explained by anything visible upon inspection. It is sometimes referred to a point representing the entrance into the œsophagus, and the examination with the laryngoscopic mirror will show some redness of the mucous membrane covering the arytenoid and supra-arytenoid cartilages and the pharyngeal surface of the cricoid cartilages. More or less soreness in the throat is constantly present; respiration often becoming painful, and phonation excessively so.

Some hours after, as the headache, pulse, and temperature decline, one or both tonsils become enlarged; usually one con-

secutively to the other. The follicles are often distended with a caseous or sebaceous material, which, under the microscope, is seen to consist of scattered (pavement) epithelial cells, some oil globules, and a mass of granular detritus, mingled with which are the spores and filaments of the *Leptothrix buccalis*, *Oidium albicans*,* rod-bacilli, and other fungi, as usually found in the secretions both of healthy and of diseased tonsils. Some drops of blood from an inflamed tonsil, in one of these cases, showed great deformity of the red corpuscles, and unusual size and number of the white corpuscles, which were more than ordinarily granular; but no micrococci could be detected therein. A drop of blood from the finger of the same patient presented nothing abnormal.

Usually, as the pain in the throat subsides, muscular soreness occurs in the neck, back, and loins, oftentimes in the sternocleido-mastoideus of the side corresponding with the tonsil first enlarging. Sometimes the soreness is experienced in one or more of the limbs; and some one of the larger joints may become more or less stiff, though neither red, swollen, nor painful. Indeed, rheumatic or rheumatoid pains may flit from one portion of the body to another, during several days. In rare instances, transient albuminuria follows.

These cases are treated with salicylic acid or salicylate of sodium. The constipation usually present, due either to the disease or to the remedy, is relieved with an appropriate saline cathartic.

The following formula makes a pleasant and efficient mixture:

R_y.—Sodii salicylatis.....℥ij.
 Ol. gaultheriæ.....m j (vel. q. s.).
 Liquoris ammonii citratis,
 Syrupi simplicis.....aa f ℥ii.—M.
 S.—A tablespoonful every two hours.

As soon as the pains are relieved, the intervals are lengthened; or sacillate of quinine or of cinchonidine is substituted, as a

*Or something which I cannot distinguish from it. I have seen this fungus in but one case, and, curiously enough, in this instance there were no aphthæ upon the mucous membrane covering the hard palate; though I have observed aphthous sores in several of these cases, and especially in the neighborhood of the incisor teeth.

tonic, in five-grain doses, at intervals of four to six hours. Ringing in the ears (an occasional occurrence) calls for cessation of the sacillyates; when it usually passes away. In one case, where persistent, it was relieved by small doses of the infusion of digitalis. During the progress of the more acute symptoms, the patient's comfort may be promoted by allowing small lumps of ice to melt in the mouth from time to time, or even by the use of the compound guaiac gargle.

Stiff-neck, the most annoying of the muscular complications, should it be severe, is relieved by faradization more promptly than by medication; the negative electrode being applied to the painful spot, or moved along the course of the sterno-cleido-mastoid muscle, the positive electrode being grasped in the hand of the same side. The same measure is, of course, applicable to other muscles.—*F. Solis Cohen. Medical News.*

DR. KOCH'S OFFICIAL REPORT ON THE CHOLERA IN EGYPT,
WITH THE RESULTS OF HIS INVESTIGATIONS AND DISCOVER-
IES, AS CHIEF OF THE GERMAN SCIENTIFIC EXPEDITION.*

As the cholera epidemic was already rapidly on the decline when the Commission arrived in Egypt, it was not to be expected from the very commencement that that country would afford full scope for the investigation. Moreover, as in an epidemic the period of its decline is the least adapted for its ætiological investigation, the original plan was to make the necessary preparatory studies in Egypt, in order, on the epidemic spreading to Syria, to avail ourselves of these in those places, which from having just been invaded by cholera, would have afforded a favorable ground for investigation.

The first part of this plan we have been able so far to carry out according to the wishes of all, for the Commission has found plenty of opportunity, during its stay in Alexandria, of collecting the necessary materials for its preparatory studies. For this success I am chiefly indebted to the kindness of the doctors of

* Translated by the *Standard* correspondent from the *Imperial German Gazette*.

the Greek Hospital, who advanced the objects of the expedition in the most effective manner, by placing at our disposal sufficient rooms, as well as the cholera patients who came to the Hospital, and the corpses of those who died from the disease.

At first the Commission occupied for their work two bright rooms adjacent to one another on the ground floor of the hospital. One of them was devoted to the microscopic work, and the other to the inoculation experiments. The animals on which the experiments were made were kept in both rooms. But as their number increased, and as it appeared dangerous to be handling the inoculation-matter in the same rooms in which one spent almost the whole day, the animals for experiments were brought into a room of the old Hospital, distant from the others, where the experiments of inoculation were made.

The materials we have had up till now for investigation have been twelve cholera patients and twelve cholera corpses. The symptoms corresponded in each case in every detail to those of genuine Asiatic cholera. Small portions of the blood of these patients, of their ejecta and excreta, were taken and examined. As it was very soon evident that the blood was quite free from micro-organisms, and that the ejecta too contained only comparatively few of them, but that the excreta contained a very significant amount of micro-organisms, these were mostly used for the inoculation experiments on the animals. Amongst the dissected subjects the most different nations are represented (three Nubians, two German-Austrians, four Greeks, one Turk), various ages (two children, two adults over sixty years of age, the rest between twenty and thirty-five), and cases of different durations of illness. The most important point, however, is that the bodies could generally be dissected immediately after death, or only a few hours afterwards. The changes which are caused in the organs, and especially early in the intestines, by decomposition, and which render the microscopic investigation of these organs extremely difficult, were thus with certainty avoided. I am inclined to give the more weight to this circumstance, as it will scarcely be possible to obtain in other places subjects so suitable for microscopic investigation. The state of the bodies, as also the symptoms of the disease, left no doubt that we had to dea

here with Asiatic cholera, and not—as was asserted at first on many sides—with diseases similar to cholera, so-called choleriform and choleroid complaints. No organized infectious matter could be traced in the blood, or in those organs which in other infectious diseases are generally the seat of micro-parasites—as, for instance in the lungs, the spleen, the kidneys, or the liver. Sometimes bacteria were found in the lungs, which, however, as was evident from their shape and position, had nothing to do with the course of the disease, but had reached the lungs by the inhaling of the ejected contents of the stomach. Micro-organisms in great abundance and of most different kinds were found in the contents of the intestines, and in the excreta of the cholera patients. No one kind was present in great predominance over the others. Special signs were also wanting which could have been attributed to a connection with the process of the disease. On the other hand, the intestines themselves gave an important result. With the exception of one case, which some weeks after getting over the cholera terminated fatally from another complaint, a certain kind of bacteria was found in the coatings of the intestines. These bacteria are stabiform, and belong, therefore, to the bacilli they resemble in size and form the bacilli found in glanders. In those cases in which the intestines by magnifying show the slightest changes the bacilli had penetrated into the utricular glands of the mucous membranes of the intestines, and had caused there a considerable irritation, as the dilation of the opening of the gland, and the collection of granular circular cells in the interior of the gland, showed. In many cases the bacilli had found their way between the epithelia of the gland, and had multiplied between the epithelia and the glandular membrane. The bacilli had also settled in large numbers on the surface of the villi of the intestines, and had often penetrated into their tissue. In severe cases, which terminated in bloody infiltration of the mucous membrane of the intestines, the bacilli were found in very large numbers, and they did not then confine themselves to the invasion of the utricular glands, but passed into the surrounding tissue, into the lower layers of the mucous membrane, and in some places right to the muscular skin of the intestine. The intestinal villi were also in such cases penetrated by bacilli,

The chief seat of these changes is in the lower part of the small intestine. If this discovery had not been made in perfectly fresh corpses, one could have made little or no use of it, for the influence of putrefaction is able to bring about similar vegetation of bacteria in the intestines. For this reason I had been unable to attach any value to the fact that I had already, a year ago, found in a cholera-infected intestine, which I had received direct from India, the same bacilli in the same order as now in the Egyptian cholera cases, for I was always obliged to think of a possibility of complication with post-mortem putrefaction. But now this former discovery, which was made in four different Indian cholera subjects, is of considerably greater value, as now the possible error caused by the appearance of putrefaction can be safely set aside. It is also not unimportant that in the similarity between the state of the intestines in the Indian and Egyptian cholera cases a further proof of the identity of both diseases is obtained. The number of cholera subjects that we were able to investigate was certainly small. But as we met with the bacilli in all cases of cholera that were immediately brought under our attention, whilst in the one case that we investigated after the process of cholera was over, and in many other cases of people who died of other diseases, and whom we examined with the same purpose, they were missing, there can be no doubt that they stand in some relation to the operation of cholera. However, from the coincidence of the latter with the finding of bacilli in the mucous membrane of the intestines, we cannot conclude that the bacilli are the causes of cholera. It might be the very reverse, and it could just as well be supposed that the operation of cholera causes such disturbances in the mucous membrane of the intestines, that from the many bacteria that are always parasitic in the intestines, one form of certain bacilli was enabled to penetrate into the tissue of the mucous membrane of the intestine. Which of these assumptions is the correct one—whether the operation of infection, or whether the invasion of bacteria is the primary cause—that can only be decided by trying to isolate the bacteria from the affected tissues, to propagate them artificially, and then by inoculation experiments on animals to reproduce the illness. For this purpose it

is absolutely necessary to have such animals at one's disposal as are susceptible to the infectious matter in question. Despite all endeavors, no one has yet indisputably succeeded in making animals ill of cholera.

Several experiments have been made on rabbits, guinea-pigs, dogs, cats, monkeys, pigs, rats, etc., but always without result. The sole statements which in this matter are deserving of attention have been made by Thiersch, who saw a number of mice get diarrhœa, and die after having been fed upon the contents of a cholera-infected intestine. This experiment has been confirmed by trustworthy experimentalists, as for instance Burdon Sanderson, though certainly disputed by others. Anyhow, it was necessary to repeat these experiments, as it is of the greatest importance to find an animal that is susceptible to cholera. For this purpose, fifty mice were brought from Berlin, as it was very improbable that the requisite number of them could be soon procured in Alexandria, and the inoculation experiments were begun on these. Monkeys, too, which are the only species of animal susceptible to some human diseases, such as small-pox, were also used for these experiments. Finally, attempts were made to infect some dogs and poultry. But in spite of all efforts these experiments were without result.

The bacilli found in the contents of the intestines and in the coatings of the intestines were also artificially propagated, and with these, too, experiments were made by giving them as food and partly by vaccination. Some of these produced putrefying illnesses when they were inoculated, but cholera could not be produced from any of them.

That the infectious matter must often be contained in a powerful form in the excreta of cholera patients is proved by much experience, especially by the frequent cases of illness amongst laundresses, who had to wash the linen of the cholera patients. In the Greek Hospital such a case occurred, and a laundress, who was exclusively occupied with the washing of linen from cholera patients, caught cholera.

It is perfectly certain that in the numerous samples made use of, some, at least, contained the infectious matter. If, however, no result was obtained, it may have been because the species of

animals used for the experiments were themselves unsusceptible to cholera, or that the correct method of inoculating has not yet been discovered. In both directions the experiments are to be continued and modified, but there is little hope of anything being attained in this direction with the materials at our disposal, for it is not very probable that the reason of the failure of these experiments is to be looked for in these circumstances alone. There is another explanation, for the accuracy of which much can be said. In one of the places visited by the cholera it is known the plague died out long before all the people had taken infection, and although the infectious matter was scattered in great quantities all over the whole place, fewer people became ill, and the epidemic disappeared in the midst of many persons susceptible to the disease. The occurrence can only be explained by the supposition that towards the end of the epidemic the infectious matter loses some of its infective power, or at least is uncertain in its spreading. But if towards the end of the epidemic even human beings are themselves no longer so liable to receive the infectious matter, then one cannot but expect that this also will be the case in experiments with animals, about whose susceptibility to cholera nothing is as yet known. For our experiments we only had at our disposal such objects as had been collected at the end of the epidemic, whose inefficiency was more or less to be pre-supposed. It is possible that under favorable circumstances—for example, at the commencement of the epidemic—the inoculation of animals might succeed, and by this means we might at once get to know if the bacilli traced by me in the mucous membrane of the intestines are the real cause of cholera.

Far as the results hitherto obtained by the Commission are from the solution of the problem, and little as they are adapted for practical use in struggling against cholera, yet, in consideration of the unfavorable circumstances and the short time of investigation, they may be considered good. They entirely answer the original purpose of the preliminary investigation, and in so far exceed this as enough has been effected for the first condition, which has to be fulfilled in inquiring into a contagious disease, by the constant discovery of characteristic micro-organisms, and thereby a fixed boundary has been placed for further investigations.

From the preceding account it can be seen that the Commission has not been able to acquire fresher information for the solution of the problems given to it, than has been obtained hitherto.

Hereupon follows a brief explanation of the localities where the investigations could be continued, concluding thus :

“The only possibility of continuing the investigations is now offered in India, where in several large towns, especially in Bombay, the cholera is prevailing to such an extent that one cannot expect it to die out for some time. There, too, we could without any doubt most easily get attached to a hospital, that having proved of so great advantage in Alexandria.”

Acting on the above report, the continuation of the scientific investigations in East India has been allowed, and the Commission will shortly leave for Bombay for this purpose.—*Medical Press.*

MUNICIPAL HYGIENE. THE GROWTH OF CITIES AND THEIR IMPORTANCE IN MODERN CIVILIZATION. DEATH RATE IN CITIES—COMPARISONS. THE SIGNIFICANCE OF DEATH RATES. By DR. JOHN S. BILLINGS, Surgeon U. S. A. (Abstract of lectures delivered in Hopkins Hall, Johns Hopkins University.)

1.

Dr. Billings began by defining sanitary science as a system of calculations and statements based upon probabilities, and not upon rigorously demonstrated laws. But probabilities govern a large part of the actions of men. This is an age of cities, and the tendency of the times is to congregation, association and division of labor. Statistics were adduced to show that in this country and England the urban population has been increasing at a rate far beyond the rural. The statistics of one hundred cities in the United States show an increase for ten years ending 1880 of 366 per cent., the total population of the country during the same period only increasing 30 per cent. “Speaking roundly, it may be said that in 1790, one-thirtieth of the population was found in cities of more than 8,000 population; in 1800, one twenty-fifth; in 1810 and 1820, one-twentieth; in

1830, one-sixteenth; in 1840, one-twelfth; in 1850, one-eighth; in 1860, one-sixth; in 1870, more than one-fifth, and in 1880 half way between one fifth and one-quarter." (*Tenth Census, Statistics of the Population, etc., Washington, 1881. Page 30.*) If 4,000 people constitute a city, more than one-fourth of the population are urban. The sanitation of cities is therefore the sanitary problem of the day. The lecturer considered the various motives which should incite to effort in this direction. If other motives were lacking, he maintained that it should be done as a matter of self-protection, on the common business principle that it will pay. The annual number of deaths in Baltimore is now nearly 9,000, having been for the last two years over $2\frac{1}{2}$ per cent. of the population. If we can prevent only one-tenth of this—that is reduce the rate to $2\frac{1}{4}$ per cent., or 20.5 per thousand, which certainly can be done, we shall save nine hundred lives, and get rid of one thousand eight hundred sick who are constant burden and expense. The money value of this is over a million dollars. The recent experience with small-pox cost the city treasury over \$90,000, to say nothing of the cost of the deaths, and of the sickness to individuals, or the loss to the business of the city, due to the prevalence of the disease. Yet this epidemic might have been prevented at comparatively small expense. Dr. B. quoted from Ruskin and Sumner to illustrate the two different standpoints from which the question of sanitation is regarded, and said there was no real contradistinction between these apparently opposite views so far as public hygiene is concerned, so long as we are careful not to consider the latter as a matter of charity and philanthropy instead of as what it is—a matter of right and justice and of self-preservation, intended to do away with those evils which are due not so much to the struggle for existence as to the imperfections of civil institutions, and which fall chiefly on certain classes, a distinction which is very properly insisted on by Professor Sumner.

The lecturer next spoke of the improvements made of recent years in municipal sanitation, a result which had its origin about forty years ago in Great Britain, and which was largely due to vital statistics, as tabulated and expounded by Dr. Farr. The figures representing the mortality of a place are not alone the

best test of its sanitary condition, but upon the whole a very good test, and often the only available one. The practical importance of accurate and complete vital statistics is not duly estimated in this country. Even health officers often give little attention to them, and are unacquainted with the proper method of using them. The most fruitful cause of error in calculating mortality rates is connected with the mode of estimating the average living population which has furnished the deaths for a particular period. In a rapidly growing city, with a fluctuating population, it is very difficult by any method to make reliable estimates as to the number of living population for any other year than that in which a complete census is taken. To illustrate some of the methods employed and their different results, the lecturer referred to the case of Baltimore. The population of this city, according to the United States census of 1880 was 332,313.

UNITED STATES CENSUS, 1870.

Total population.....	267,354
Number of families.....	49,929
Persons to a family.....	5.35
Number of dwellings.....	40,350
Persons to a dwelling.....	6.63

UNITED STATES CENSUS, 1880.

Total population.....	332,313
Number of families.....	65,356
Persons to a family.....	5.08
Number of dwellings.....	50,883
Persons to a dwelling.....	6.54

The method ordinarily used by statisticians is to suppose that the population has increased since 1880 in the same proportion as between 1870 and 1880: thus estimated, the population of the city, June 1, 1881, would have been 339,620; June 1, 1882, 347,087; June 1, 1883, 354,720. These figures are believed by the Health Officer of Baltimore and by the gentleman charged with the registration of its vital statistics to be too small, and they prefer to take as the basis of their calculation the number of voters, as ascertained by the police census, and to assume that

each voter represents five persons of the population. In this way the population is calculated at the middle of 1882, as 408,520. The city health authorities refuse to accept the census of 1880, and estimate the population at that time to have been 393,796, or over 61,000 more than the census, a deficiency in the latter, according to them, of over 15 per cent. Their estimate is based upon the following considerations :

"There are 80,000 registered legal voters in Baltimore ; five inhabitants to a legal voter is a fair and reasonable allowance, which would make the population 400,000. The census taken by the police for our School Board, of children between the ages of six and twenty-one years, gave 86,961. This would be a fair estimate of one-fifth of our population, making the same 434,805. * * * Again, there are 90,000 houses in Baltimore. Deduct 10,000 for manufacturing establishments, warehouses, stores, and unoccupied dwellings, estimating five inhabitants to each house (a very low estimate) our population would be 400,000." (A. R. Carter, letter in *San Engineer*, Feb. 15, 1881, p. 130). The lecturer said : "A failure to enumerate 15 per cent., or more than one out of every seven inhabitants could only result from criminal negligence on the part of the enumerators, a negligence directly opposed to their pecuniary interests." General Walker says of the census of Baltimore that it was taken by a thoroughly capable and experienced officer, who had had experience in the same field in 1870 ; that he knew of nothing impeaching the completeness and integrity of this officer's work ; that the danger of omission in a city like Baltimore, with comparatively few persons in a dwelling or tenement house was at a minimum ; that the children between six and twenty-one years of age constitute probably between one-third and two-fifths rather than one-fifth, a proportion only found in Paris, "where the science of preventing infant life is very thoroughly understood and extensively practiced ;" that if the ratios of New York, Brooklyn or Albany, were applied to the school population of Baltimore as determined by the police census, the inhabitants would be less than 290,000 ; even according to the ratio of Boston, where the proportion of school children to pop-

ulation is less than in any other American city, the population would still be less than 316,000.

Dr. B. then pointed out that the police census shows a diminution rather than an increase of the voters. Also that the number five is much too large a ratio; the ratio should be calculated, from census data, not assumed. In Boston, where the estimate is made in the same way (owing to a recent extension of the city limits), four is taken as the ratio, which is evidently much more nearly correct. The true ratio for Baltimore is about 4.25. The estimate as to the number of houses is much too great, and the lecturer saw no reason to doubt the accuracy of the census figures. Their correctness is confirmed by the police census of houses taken in December, 1883, which gave the following results: Number of dwellings, 54,546; of places of business, 6,885; of churches, 267; total, 61,698. This corresponded with data which the lecturer had obtained from the Water Department, according to which, on January 1, 1883, there were 51,284 houses supplied with water and 6,000 unsupplied. "From these data I think we may conclude that there are not over 54,500 inhabited dwellings at present within the city limits, and if we allow to each 6.50 persons, which is the ratio shown by the last census, we should obtain 356,430 as the present number of inhabitants. If we take the last police census and, making a little allowance for those at that time absent from the city, take the number of voters at 82,000, and take the ratio at 4.03, which is larger than that derived from the census data, we find that the number of inhabitants is 352,600. Taking all these data together, the probability becomes very great that the living population within the city limits on January 1, 1883, was between 350,000 and 356,000 persons." "The mode of computing population by the number of occupied houses is one which gives fairly accurate results, provided the number of such houses is accurately ascertained, but it will not do to merely estimate them."

None of our cities possess accurate birth statistics, except possibly a few in Massachusetts; the deaths are, however, in most cities, fully and fairly reported.

The lecturer then proceeded to show the influence of cities on

the health of their inhabitants, and showed that the mortality is greater in large cities than in small, and greater in the latter than in rural districts. The lecturer next showed a diagram giving the death rate in Baltimore for each of the last thirty-three years. The average for the ten years preceding 1860 was higher than since, but it now seems to be slowly increasing. The diagram gives the impression of large waves of variation, with a period of from ten to fifteen years, and the surfaces of these large waves are irregular from the smaller variations for the single years. These great waves may possibly be connected with changes in the sun, shown by the sun-spots.—*Maryland Med. Journal.*

TREATMENT OF WARTS WITH MAGNESIA.

Lucas-Championnière reports in the *Journal de Méd. et de chir. prat.*, August, 1883, a case of a young child, aged 8 years, cured of a great number of warts on both hands by the treatment of Foussagrives. This treatment consists in giving each day 80 centigr. of calcined magnesia internally. The cure was complete in two months, and due to the action of the magnesia. The author remembers the anatomical analogies existing between warts and epitheliomas, and thinks that the magnesia may give equally good results in the latter. It will be interesting to make this research.—(*La France Médicale.*)

RUMINATION AMONG THE INSANE.

Dr. Bouchard read a paper at the Society of Medical Sciences of Lille, on the rumination, which known as a pathological rarity, is in reality very frequent, especially in insane asylums. There are fourteen ruminating patients in the asylum of Lommelet; eleven among 100 idiots, and three among 576 patients. Many of these patients ruminate before presenting any symptoms of insanity; therefore this symptom might have a grave diagnostic significance.—*Journal des Sciences Méd. de Lille.*